OCTOBER 1979

# DISTRIBUTION

## EXPORTING TO THE ORIENT

The Role of the Distribution Manager

Transpacific Transportation: A question of stability

VOLUME 78, NUMBER 10

Chilton's

OCTOBER 1979

# DISTRIBUTION

ESTABLISHED 1901

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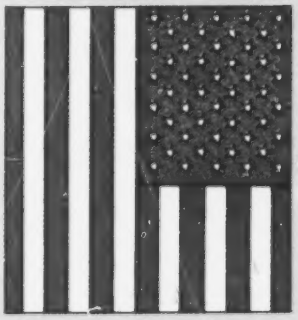

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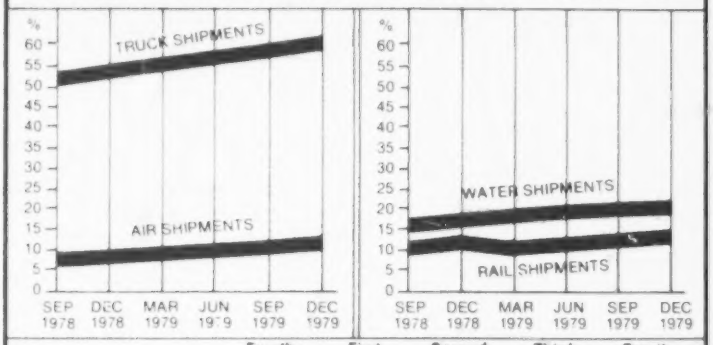
# DISTRIBUTION PERFORMANCE INDEX




| CATEGORY | Fourth Quarter '78 | First Quarter '79 | Second Quarter '79 | Third Quarter '79 | Fourth Quarter '79 |
|---|---|---|---|---|---|
| Truck Shipments | 2.1% | 1.7% | 1.5% | 1.1% | 1.1% |
| Air Shipments | 1.5% | 0.5% | 0.4% | 0.5% | 0.6% |
| Water Shipments | 0.7% | 1.1% | 0.6% | 0.2% | 0.2% |
| Rail Shipments | 1.3% | 0.1% | 0.2% | 0.3% | 0.3% |

*The expected recession forecast for the past six months is finally beginning to show itself with the slowdown in factory orders, the decrease in new car sales and the drop in retail volume.*

*This decline is demonstrated in the recent DISTRIBUTION INDEX, which shows a slowdown in the transportation sector over the third quarter of 1979. Rail shipments are stable, rising by only a tenth of a percent from last quarter. This slight increase was partially due to hedge buying by some large firms hoping to stock up on critical raw materials before prices go even higher.*

*Use of air freight increased in the fourth quarter—but only fractionally—rising from 0.5% in the third quarter to only 0.6% in the fourth quarter. While air freight has traditionally been a growth industry, shippers forecast a drop in its usage for the balance of the year.*

*Truck shipments are usually the most popular form of transit for shippers because of their versatility. But it, too, is forecast to remain stable for the last quarter of the year. The same observation is made for water borne shipments for the fourth quarter.*

*An upturn in the transportation sector is not expected until the last part of the first quarter of 1980. The firms in the study were unanimous in forecasting a drop for the final period of 1979.*

*Many of the distribution managers in the study were pessimistic about the future. As one stated, "There is too much uncertainty. My firm is unable to respond because of the slack demand. My only advice to other companies is to ride out the depression storm."*

Chilton's

NOVEMBER 1979

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Chilton's

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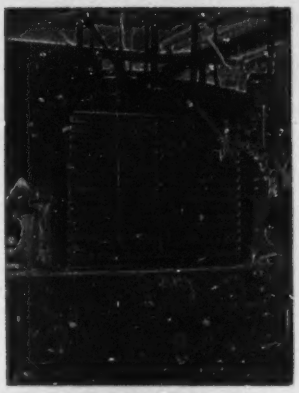

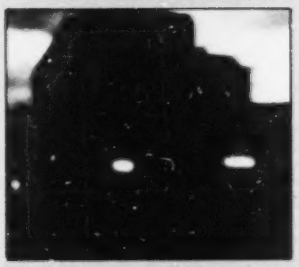

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*The Cover: The trucks are the same, but the scene looks different—just the feeling the industry has about the new world of motor carriage in an era of re-regulation and cost escalation.*

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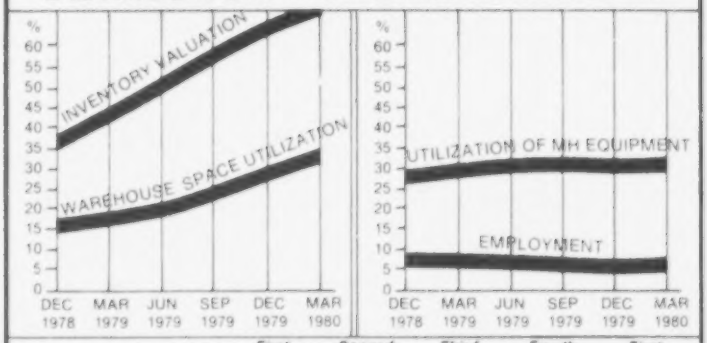
## DISTRIBUTION PERFORMANCE INDEX




| CATEGORY | First Quarter '79 | Second Quarter '79 | Third Quarter '79 | Fourth Quarter '79 | First Quarter '80 |
|---|---|---|---|---|---|
| Inventory Valuation | 6.1% | 7.1% | 8.2% | 6.3% | 5.2% |
| Warehouse Space Utilization | 8% | 2.5% | 3.1% | 4.2% | 29.1% |
| Exp. and Utilization of Matls. Handling Equipment | 1% | 0% | (.5%) | (.4%) | 30.9% |
| Employment | (.3%) | (.4%) | (.3%) | (.4%) | 71.3% |

*More of the same is an apt description for the economy in the last quarter of 1979 and the first quarter in 1980.*

*The recession will continue through both quarters and run well into the second quarter of the coming year. Consumer demand is expected to decline dramatically over the same period.*

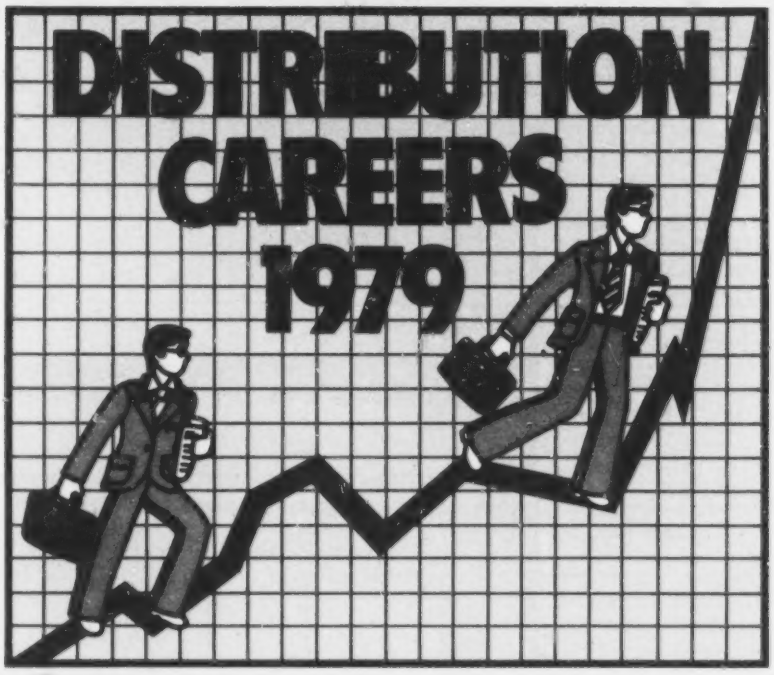
*Even though inflation is expected to moderate, 1979 will still go into the record books as the most inflationary year since 1946. It's expected that the inflation rate for all of 1979 will be pegged at 14.7 percent.*

*The Distribution Index reflects the slowdown in economic activity and the rise in inflation. Shippers are forecasting a rise of 6.5 percent in inventory valuation for the first quarter of 1980. While this is only a modest increase over fourth-quarter figures, the trend is clearly upward and will not moderate until the middle of next year.*

*Inventories are climbing as demand slackens. This is reflected in the forecast of a 4.4 percent increase in warehouse space utilization for the first quarter of 1980. Companies are in a better position with regard to the management of their inventories during its recession as compared to the past, but the levels of space used are still uncomfortably high.*

*Companies are becoming conservative with regard to the purchase of new materials handling equipment. As warehouse activity begins to fall off, companies are cutting back in equipment expenditures. As one materials manager stated, "I fix up the old equipment where possible. We have to control our costs in this period of uncertainty."*

*The trend is down in the employment area. Shippers are forecasting a slight decline of 0.3 percent in employment during the first part of 1930. Employment during this recession is expected to be only modestly affected when compared with past recessionary declines. One shipper gives an indication as to why this is so. "My firm tries to keep people on as long as possible," he explains. "Laying someone off is a painful thing to do."*




**The movers and shakers who run the distribution side of American business are being moved and shaken, themselves. Inflation, fuel costs, recession, increased business and government red tape—all are shaping the distribution careerist's work and life style.**

Distribution management is becoming more and more management and less and less distribution.

That is the trend which has shown itself during the eight years in which we have conducted our survey of career patterns in distribution. The trend continues, as evidenced in the 1979 survey.

The chief distribution executive has moved from an activity-based, functionally constrained manager to a corporate executive with substantial interface responsibilities outside the distribution area.

Along with this change has come an external orientation and a concern with the impact of external factors such as energy, technology, and productivity and their role in shaping the future of the firm's distribution environment.

The external pressures of inflation, energy and high interest rates have focused senior management's attention on both the cost and performance of the distribution function. The function has emerged in many firms as an important element of corporate strategy.

This year's survey sought answers to four major questions. First, how is the distribution function organized? Second, what are the distribution executive's primary responsibilities? Third, what is the demographic profile of the distribution executive? Fourth, how does the distribution executive perceive the future?

Data used in this survey come from a three-page questionnaire which was mailed to 416 members of the National Council of Physical Distribution Management during the summer of 1979.

The 131 questionnaires (126 usable) which were returned represent a response rate of 32 percent. While this is down from the 38 percent response to the 1978 survey, it is still adequate in terms of level and representation.

The tables and text on the following pages reveal the continued trend among distribution managers toward greater emphasis on distribution strategies and less emphasis on the nuts and bolts of distribution tactics.

*Continued*

**By DR. BERNARD J. LA LONDE,**
Riley Professor of Marketing and Logistics,
and **MARTHA COOPER,**
Research Associate, Ohio State University

# WHO CONTROLS DISTRIBUTION?

Since the early 1970s, there has been a shift away from positioning physical distribution as a staff function.

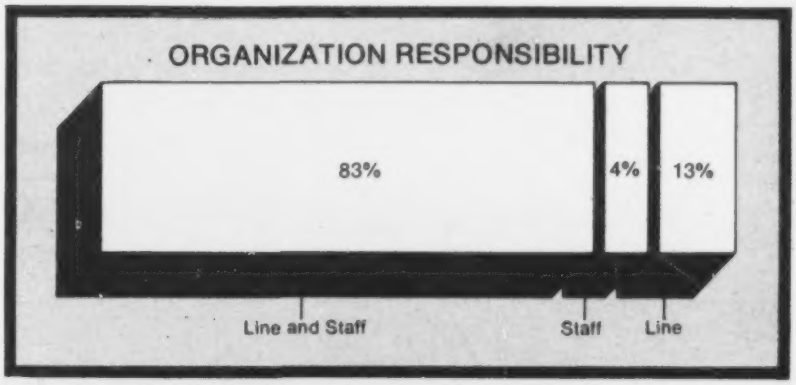
This trend seems to be stabilizing, with a large majority of firms opting for combined staff-line or staff-divisional types of organization.

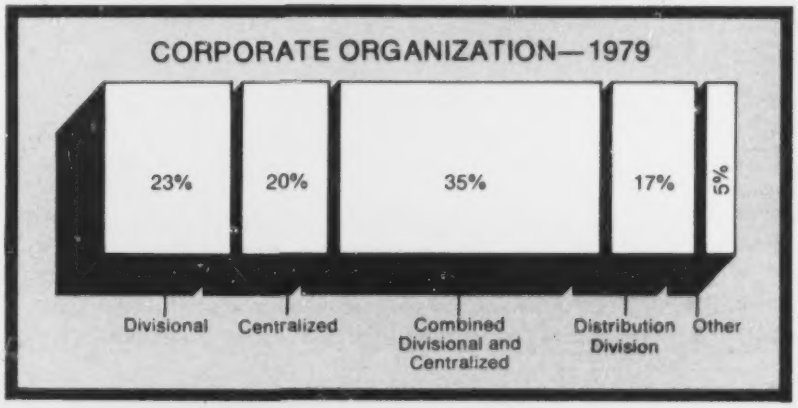
This stabilizing trend is evident in the responses to our survey. Approximately 80 percent of the respondents report both line and staff responsibility.

On the specific positioning of the distribution function, 35 percent of the respondents report a combined centralized and divisional organization.

Of the remaining respondents, 20 percent report either a divisional organization, a centralized organization or a separate distribution division.

While there have been some small variances reported in the data reported over the last three years, this organizational trend seems to be stabilizing at the levels shown here.




# DISTRIBUTION EXECUTIVES' SALARIES

Some distribution executives are making more money this year, compared with 1978.

However, the increases aren't equally spread through management ranks, and considerable numbers of executives aren't keeping up with inflation.

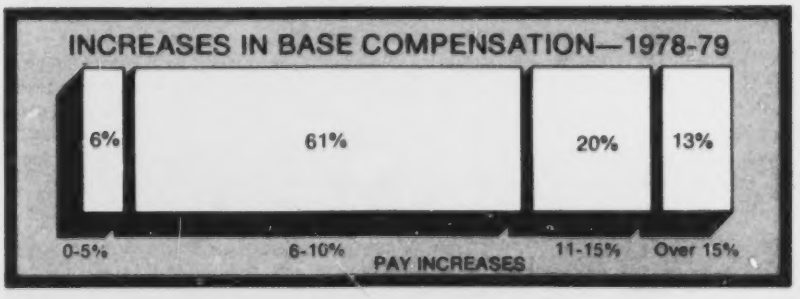
Average compensation levels of the distribution executive increased in 1979. But the rate of increase slowed for the distribution manager and director.

In the vice presidential spot, the salary increase again exceeded the rate of inflation by a significant margin.

Economists expect the inflation rate for all of 1979 to run at more than 14 percent. If that's they case, then 87 percent of those surveyed will make the same or less—in real dollars—in 1979 as they did in 1978.

AVERAGE COMPENSATION—1979

| | Manager | Director | Vice President |
|---|---|---|---|
| Top quarter | $51,125 | $62,700 | $83,750 |
| Second quarter | $39,500 | $48,800 | $63,800 |
| Third quarter | $32,375 | $39,500 | $57,200 |
| Lowest quarter | $25,500 | $33,600 | $47,500 |
| Average | $37,125 | $46,100 | $62,800 |



# WHAT TAKES UP THE EXECUTIVE'S TIME?

The distribution executive is spending less time in the purely distribution area and more time in general administration.

The primary trends in specific responsibilities of the distribution executives have indicated a gradual shift from a narrow traffic and warehousing responsibility to a broader range of responsibility both within and outside the distribution area.

Our survey finds that managers spend some 28 percent of their time outside the distribution function. Directors spend about 33 percent of their time outside the distribution function, and vice presidents spend 40 percent of their time outside the function.

Almost two-thirds of the time spent outside the function goes to interacting with either the marketing or production area.

Managers, directors and vice presidents spend 20 to 25 percent of their total time in the transportation and warehousing areas, according to those surveyed.

We also found that the amount of time spent at all levels in "general administration" has gradually risen over the eight years in which we have conducted our surveys.

Distribution executives are spending more time on matters of procurement, product planning and sales forecasting.

For example, in all of our surveys we asked respondents in which areas they had *no* responsibility.

In 1973, 54 percent had nothing to do with procurement. In 1976, 42 percent had no involvement with procurement. In 1979, the percentage has shrunken further: Only 36 percent have nothing to do with procurement.

Similar trends were noted in product planning and sales forecasting.

In 1973, some 71 percent of those surveyed had no hand in product planning. The figure dropped to 59 percent in 1976 and 54 percent in 1979.

In 1973, some 89 percent of those surveyed did not get involved in sales forecasting. By 1976, 58 percent had no such involvement. By 1979, 51 percent had no part in sales forecasting.

Clearly, distribution executives who had once been removed from procurement, product planning and sales forecasting are gradually moving into these areas.

## TIME EXPENDITURES ON DISTRIBUTION AND NON-DISTRIBUTION RELATED ACTIVITIES

### DIRECTORS—1979

| DISTRIBUTION (67%) | |
|---|---|
| Traffic | 12% |
| Inventory | 7% |
| Warehousing | 10% |
| Other processing | 6% |
| General administration | 12% |
| Other | 20% |

| NON-DISTRIBUTION (33%) | |
|---|---|
| Marketing | 9% |
| Production | 10% |
| Data processing | 5% |
| Finance | 6% |
| Other | 3% |

### VICE PRESIDENTS—1979

| DISTRIBUTION (60%) | |
|---|---|
| Traffic | 8% |
| Warehousing | 8% |
| Inventory | 4% |
| Purchasing | 4% |
| Other processing | 5% |
| General administration | 18% |
| Other | 13% |

| NON-DISTRIBUTION (40%) | |
|---|---|
| Marketing | 17% |
| Production | 8% |
| Data processing | 9% |
| Finance | 4% |
| Other | 2% |

### MANAGERS—1979

| DISTRIBUTION (72%) | |
|---|---|
| Traffic | 14% |
| Warehousing | 13% |
| Inventory | 8% |
| Other processing | 5% |
| Plant & warehouse | 5% |
| International | 4% |
| General administration | 12% |
| Other | 11% |

| NON-DISTRIBUTION (28%) | |
|---|---|
| Marketing | 9% |
| Production | 9% |
| Data processing | 4% |
| Finance | 4% |
| Other | 2% |

# WHO IS THE DISTRIBUTION EXECUTIVE?

He is, on average, in his forties, is a college grad and has a degree in business administration.

That picture of the "average distribution exec" is not a very clear one, however. Though the bulk of those executives surveyed fit this pattern, there is farily wide variance in ages and educations among our respondents.

For a more detailed look at the profile of the distribution executive, please study the illustrations on this page.

Our findings suggest that the distribution executive is attaining executive status at an earlier age than his functional counterparts (except for sales and marketing).

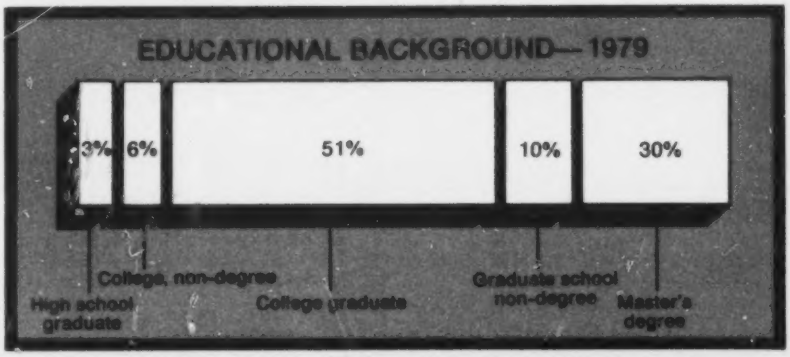
The emphasis on college educated distribution executives continues. Some 97 percent of this year's respondents have at least some college experience. And 91 percent had a least one college degree.

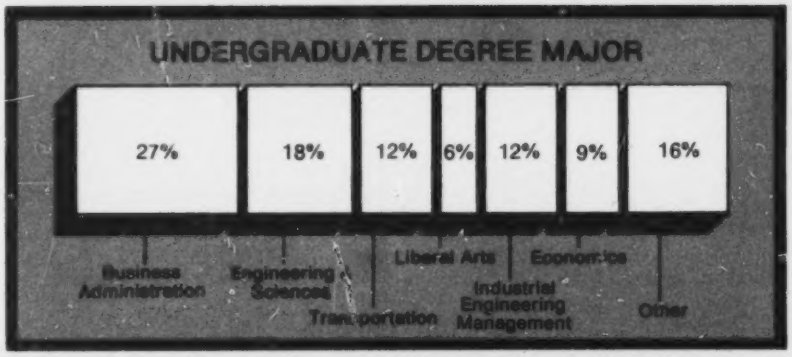
Some 40 percent of the respondents have done post-graduate work, and 30 percent have a master's degree or higher.

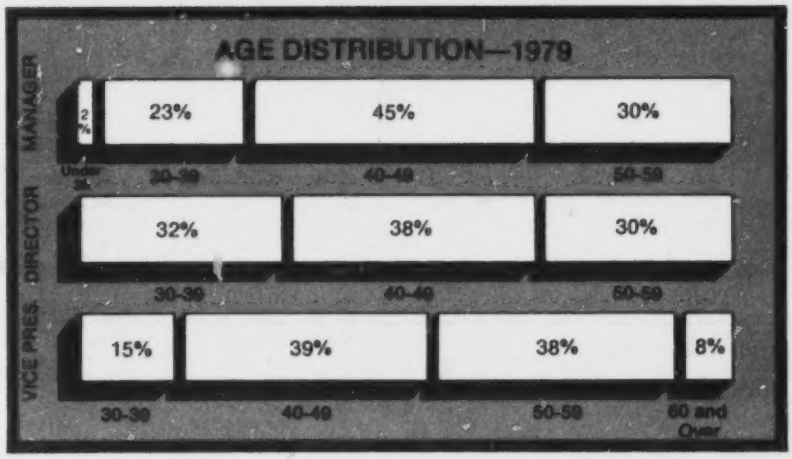
Business administration, engineering and science backgrounds continue to dominate the undergraduate preparations of the executives in distribution capacities.

Our findings also indicate that the distribution executive has attained a level of education which matches or exceeds that of his functional counterparts in the firm.

In 1979, as in previous years, it is unlikely that the current distribution executive either was formally educated in physical distribution or began his or her career in the distribution area.



# WHAT'S THE DISTRIBUTION OUTLOOK?

One way to learn what today's distribution executive thinks will be the challenges of tomorrow is to ask him what he would study if he could go back to school.

This year, as in past years, we asked this question: "If you were offered an opportunity to return to school in the near future for three months, and could take a custom-designed curriculum of your choosing, what kinds of things would you study?"

Again, as in past years, almost one-third of the respondents indicated a first preference for the financial area. The remaining categories were similar to the 1978 survey, except that cost accounting and inventory moved up in preference for additional study.

This year, a new section was added to the annual survey. Since inflation has plagued the distribution budgeting process, it was decided to survey the distribution executives on their forecast of behavior for significant distribution cost components.

Note that every key budget item was forecast to increase in cost during 1980 at rates higher than the 1979 rate.

This is consistent with the findings that every major industry group but one expects the same trend in costs. The exception is the electronics industry, which expects a downturn in the rate of increase for distribution costs.

We also asked respondents to "identify the two major factors which will, in your judgement, influence the growth and development of the corporate distribution function during the next decade."

The most significant change from previous years' responses was the new importance of the "Economy," the "Energy Availability/Cost" and the "Regulation" factors. This suggests that, increasingly, the concerns of the distribution executive are for those factors which are external to the firm. ■

**EDUCATIONAL NEEDS—1979**

| Area | First Choice | Second Choice |
|---|---|---|
| Finance | 31% | 18% |
| Data Processing | 7% | 9% |
| Distribution Planning | 9% | 8% |
| Marketing | 4% | 13% |
| Cost Accounting | 9% | 4% |
| Inventory Control | 8% | 0% |

**FACTORS SHAPING THE FUTURE DISTRIBUTION ENVIRONMENT**

| Factor | Most Important | 2nd Most Important |
|---|---|---|
| Distribution Costs | 36% | 19% |
| Economy | 12% | 8% |
| Energy Availability/Cost | 11% | 13% |
| Top Management's View of Physical Distribution | 9% | 9% |
| Customer Service | 8% | 13% |
| Regulation | 7% | 9% |

**FORECAST INCREASES IN TOTAL DISTRIBUTION COSTS BY INDUSTRY**

| Industry | % Increase—1978 to 1979 | 1979–1980 |
|---|---|---|
| Metals & Metal Working | 12.0% | 13.0% |
| Sporting Goods | 11.3% | 15.9% |
| Paper | 11.0% | 11.0% |
| Electronics | 10.6% | 10.1% |
| Food | 9.8% | 10.8% |
| Pharmaceuticals | 9.6% | 12.0% |
| Machine Tools & Machinery | 8.5% | 9.5% |
| Chemicals & Plastics | 8.1% | 9.3% |

**FORECAST INCREASES IN KEY ELEMENTS OF DISTRIBUTION BUDGET**

| Key Budget Element | % Increase—1978 to 1979 | 1979 to 1980 |
|---|---|---|
| Motor Carrier—LTL | 12.4% | 14.3% |
| Motor Carrier—TL | 10.1% | 11.4% |
| Private Carriage | 8.4% | 10.0% |
| Contract Carriage | 8.5% | 10.8% |
| Railroad Rates—CL | 9.1% | 10.3% |
| Railroad Rates—Piggyback | 9.8% | 10.6% |
| Warehousing Costs—Corporate | 8.5% | 9.8% |
| Warehousing Costs—Public Warehouse | 8.6% | 9.7% |

# NOTE

ONLY THE FOLLOWING PAGES OF THIS PUBLICATION

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Cover 1, p. 3, 34 - 38, 46 - 50.

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DECEMBER 1979

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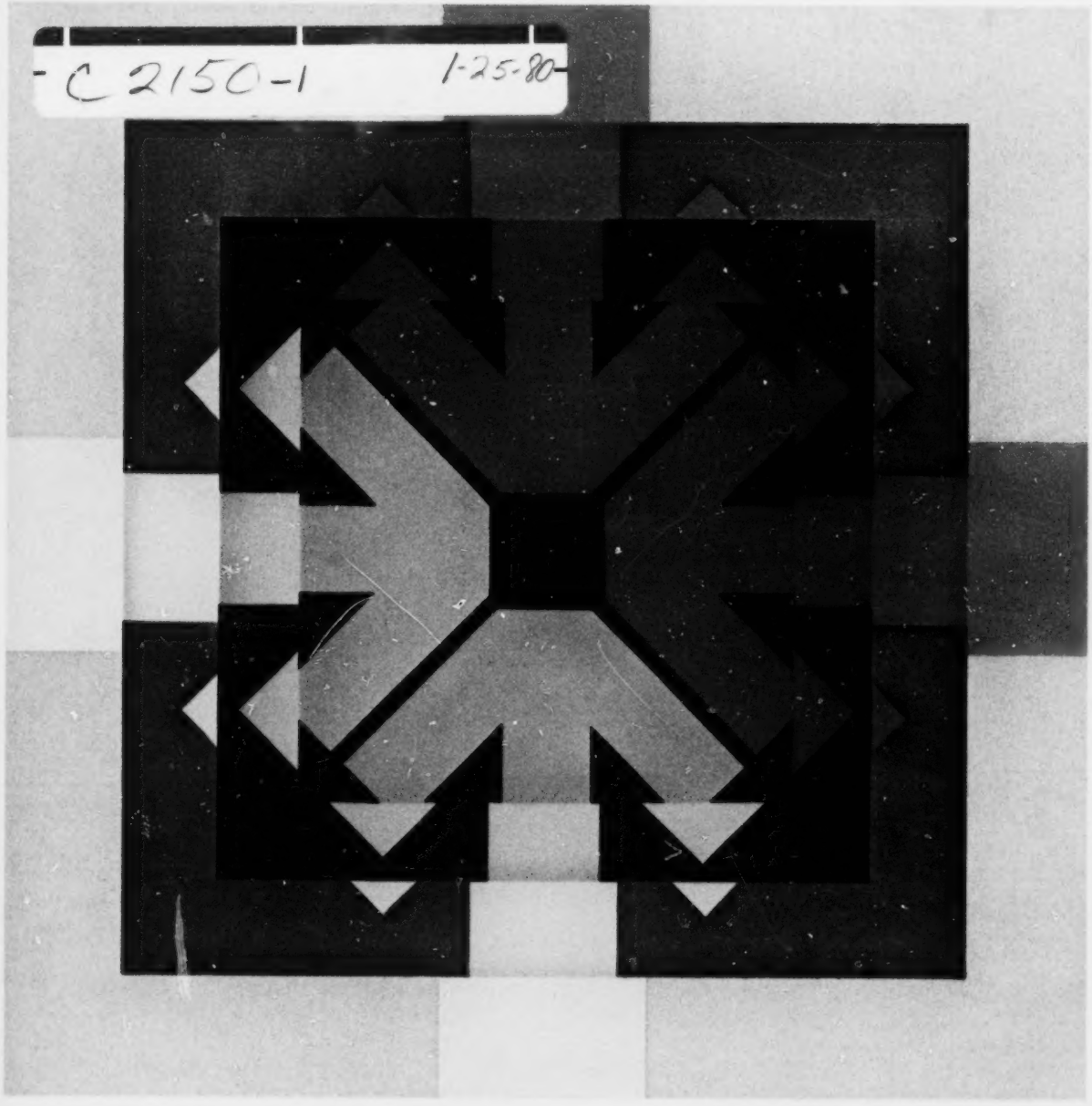

## THE DIMENSIONS OF DISTRIBUTION

HOW DISTRIBUTION MANAGEMENT SEES ITSELF

1980 OUTLOOK: THE ROLE OF THE DISTRIBUTION MANAGER

HOW'S YOUR DISTRIBUTION PLANNING?

VOLUME 78, NUMBER 12

Chilton's

# DISTRIBUTION

ESTABLISHED 1901

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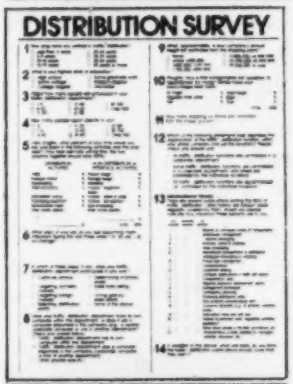


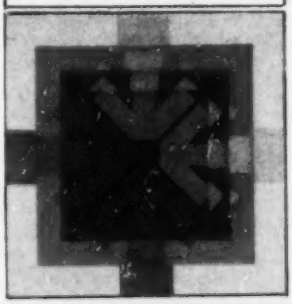

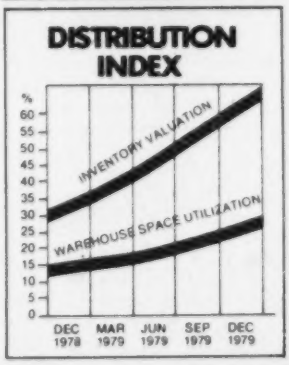


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*The Cover: This art work illustrates the many dimensions of distribution uncovered in our massive survey of the distribution industry. The art comes from "Yale Management Guide to Productivity" and is supplied courtesy of the Eaton Corp.*

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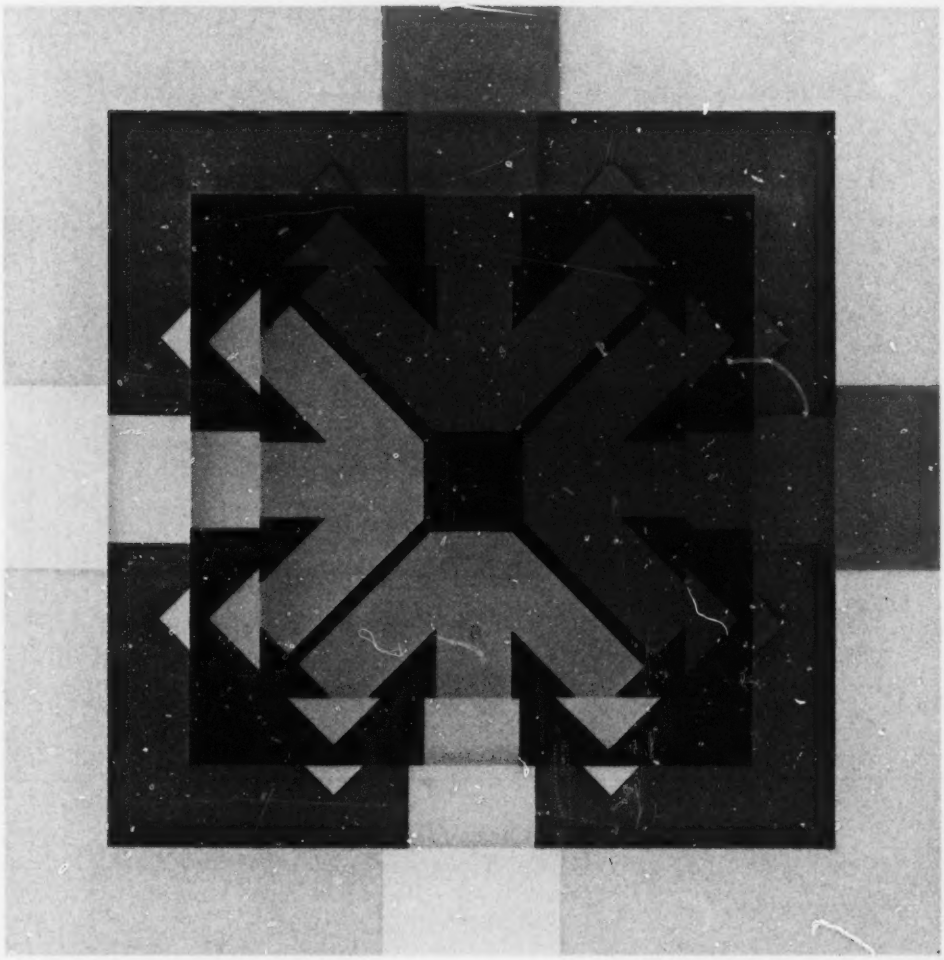
DISTRIBUTION (USPS 158100), (ISSN 0195-7244), owned by Chilton Co., is published monthly at Chilton Way, Radnor, PA 19089 (215) 687-8200. Chilton Co. is a division of American Broadcasting Companies Inc., New York, N.Y. Controlled circulation postage paid at Philadelphia, Pa. ©**CHILTON COMPANY 1979.** Subscription rate: U.S. and possessions, $20 per year. Canadian, $30. Foreign, $40. Single issue $2.00 except Distribution Guide Issue—$20 per copy. Postmaster: Send form 3579 to DISTRIBUTION, P.O. Box 2105, Radnor, PA 19089.

# THE DIMENSIONS OF



Who runs distribution in this country?

How do they do it?

Those two questions are deceiving in their brevity. They are not at all simple, and getting the answers to them might just be a shade less difficult than landing a man on the moon.

But for the distribution industry, "the Eagle has landed" in the form of this magazine's survey of distribution executives.

We contacted nearly 24,000 distribution and traffic executives in the manufacturing industries throughout the U.S. Each received a three-page questionnaire comprised of 21 questions.

The questionnaire was—intentionally—not an easy one to fill out. We sought to get to the heart of a lot of information about these executives, and the complexity of the questionnaire reflected this effort.

Incidentally, pre-testing proved that executives long used to the complicated paperwork of distribution were not put off by the detailed questionnaire.

We received 2,246 complete, usable responses for a rate which our researchers consider quite a coup for a survey of this complexity.

What can these 2,246 people tell you? Plenty.

To get the message out, *DISTRIBUTION* will zero in on particular aspects of the survey in each issue throughout 1980.

In this first report, we profile the 2,246 executives who responded to our questions. In later reports, we'll go into detail. We'll re-

# DISTRIBUTION

**The largest, most important survey of distribution executives reveals a wealth of information about how distribution managers see themselves**

veal the respondent's feelings on the debate of traffic and distribution and where the two should—or do—meet. We'll pinpoint which kind of executive spends a lot of time on specific non distribution activities. We'll detail the executives' purchasing of modes and equipment. And much more.

While the mass of information collected doesn't easily boil down to broad generalities, some overall statements are possible.

Our survey tells us that the distribution executive has a lot of job experience in the field. He's educated. He's a manager of people, departments, distribution points and equipment. The vast majority use computers in some way, though few have computer equipment dedicated to their department.

The survey also shows that most distribution departments are, to one degree or another, decentralized. And, significantly, the survey tells us that the majority of the executives are well versed in the goals of their departments as service organizations.

We also found that, while the execs spend most of their time on distribution-related work, they are spending more time on other duties.

In short, the entire *DISTRIBUTION* survey has much to say. And all will be aired during the coming year.

## DIMENSION: ORGANIZATION

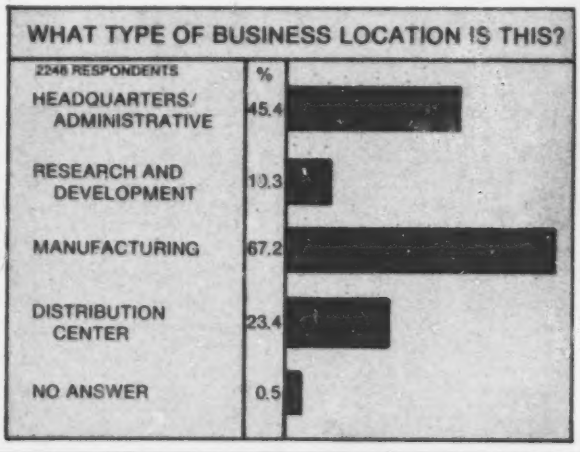
Multiple shipping locations are controlled out of the offices of the offices of the majority of the respondents. However, control is not complete in the majority of cases and a high degree of decentralization exists in the distribution and traffic organization.

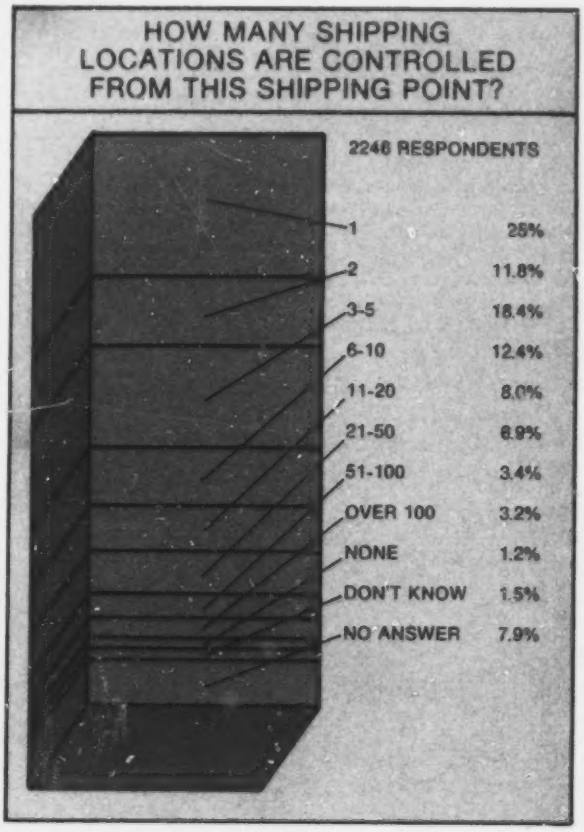
Nearly two-thirds of the 2,246 respondents noted that more than one shipping location is controlled from the shipping points at which they are located. And the majority reported that more than three shipping locations were controlled from their office sites.

As the accompanying chart illustrates, a substantial number of those responding have between two and ten shipping points under the control of their offices.

In most cases, traffic and distribution functions operate under a mixed bag of centralized and decentralized controls. Some 49.9 percent of the respondents indicated that such a mixture of control exists in their operations.

Nearly a third of the respondents said all traffic and distribution functions are fully controlled by a central department. And 17.5 percent said all traffic/distribution functions are fully decentralized.



# DIMENSION: THE MISSION

Distribution executives take a long view of the activities and goals of their department.

When asked to check off which activities their department participates in, some 83 percent checked customer service first.

However, since distribution is intimately linked with serving customers, one wonders why the remaining 17 percent did not check the box. Further reports will examine this question.

Among the activities participated in, a distant second place is held by "selecting distribution points." About half of the respondents take part in the selection process.

Significant numbers of respondents are also involved in determining inventory levels, sales forcasting, timing special sales efforts and targeting domestic markets for their companies. These activities, not traditionally a part of traffic and distribution, are becoming more so.

With this trend in mind, it's of interest to study the way distribution executives spend their time on the job.

The accompanying table lists the averages of responses from those surveyed. Due to this averaging, the columns do not add up to 100 percent.

Also, note that each category was answered by different numbers of respondents. Because of this, it isn't possible to say precisely how much time the executive spends on which activity.

However, it is possible to judge the relative amount of time spent on particular activities. That is, within the context of the table, it is possible to get a ballpark estimation of where the distribution executive spends much time, and where he spends little time.

Looking at the table, it's obvious that most of the respondents spend the most time on the single activity of traffic. (Read the table this way: 2,175 respondents spend an average of 50 percent of their time on traffic. Another example: 717 respondents spend an average of 7.4 percent of their time on purchasing equipment.

After traffic, the duties of administration, inventory control and warehousing are about equal in demanding the executive's time. Order processing, purchasing equipment and international routing bring up the rear.

Non-distribution activities still take relatively small amounts of the distribution executive's time.

It's of interest to note that only a small percentage of the executive's time is spent on data processing.

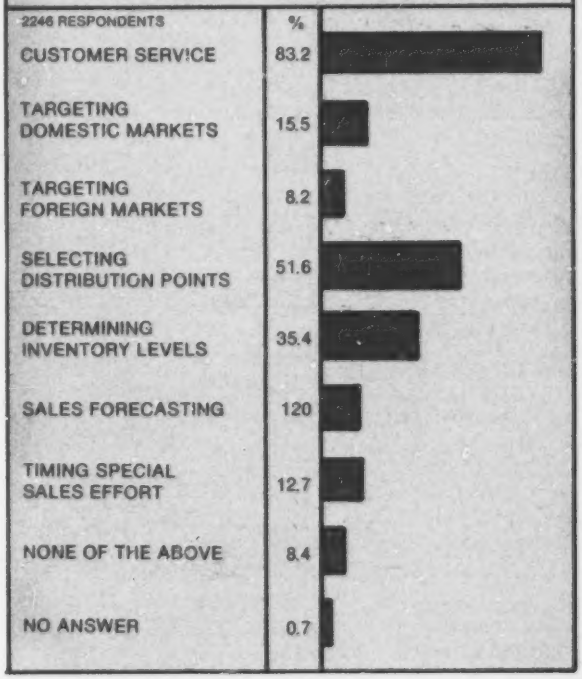
Of all respondents some 1,680 have access to a computer. Yet, according to the survey, only 569 spend any time at all on data processing.

This is another development which will be further detailed in future reports in this series.

## HOW DISTRIBUTION EXECUTIVES SPEND THEIR TIME

| Distribution Activities | | Non Distribution Activities | |
|---|---|---|---|
| Traffic (2175) | 50 | Product design (114) | 4.73 |
| Inventory Control (1036) | 14.4 | Package design (475) | 5.7 |
| Warehousing (1234) | 14.11 | Marketing (370) | 10.7 |
| Order Processing (907) | 13 | Finance-Equipment Leases (400) | 5.83 |
| International Routing (815) | 9.4 | Letters of Credit (219) | 6.19 |
| Purchasing Equipment (717) | 7.4 | Site Selection (206) | 4.44 |
| Administrative duties (1573) | 20 | Data Processing (569) | 7.9 |

## IN WHICH AREAS DOES YOUR TRAFFIC/DISTRIBUTION DEPARTMENT PARTICIPATE IN ANY WAY?



# DIMENSION: THE EXECUTIVE

The men and women who manage distribution for the nation's manufacturers are both educated and experienced.

Our survey reveals that the vast majority of respondents have been at work in the fields of transportation and distribution for a long time. As the chart indicates, some 87.9 percent have more than five years experience in these fields.

Even more impressive, the majority of respondents—some 53.6 percent—have at least 15 years in the fields.

Other researchers have found a trend towards the increased control of distribution by executives who have come from disciplines outside of distribution and transportation.

If that trend exists, then these "outsiders" haven't made a great deal of headway to date.

Instead, our research shows that the control of distribution is largely in the hands of people who have spent significant amounts of time in the field.

In addition to their on-the-job education, the respondents reported on their formal education.

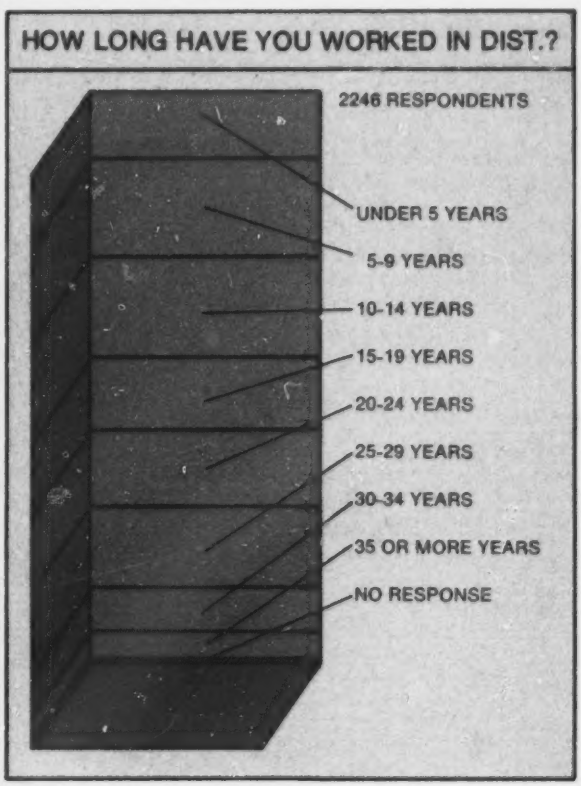
Out of the 2246 respondents, not a single one lacked a high school diploma. Also, the majority—87.3 percent—listed some formal education beyond high school.

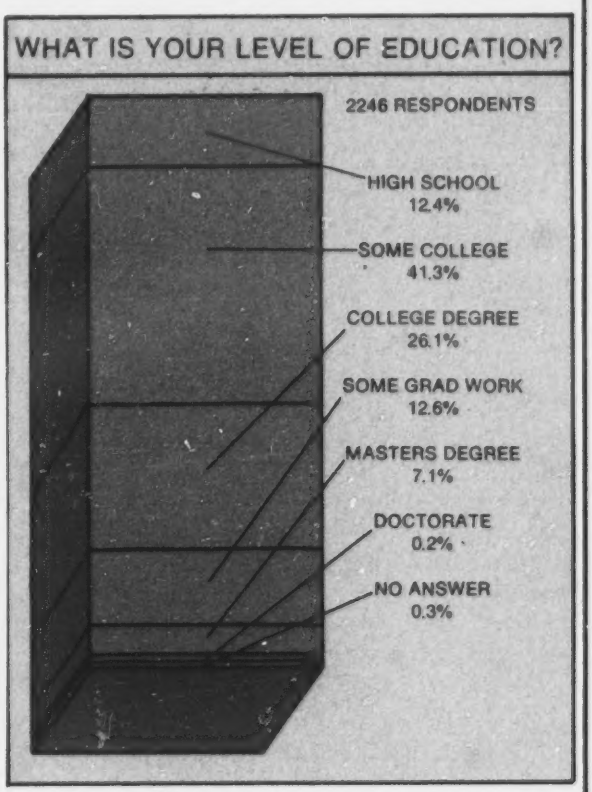
Interestingly, a large number of distribution executives went to college, but didn't graduate. The survey reveals that 41.3 percent of the respondents listed their highest educational attainments as "some college."

Another 46 percent reported that they had earned undergraduate degrees, and 19.9 percent went on to graduate work. Masters degrees were earned by 7.1 percent of the respondents.

Few received doctoral degrees—only 0.2 percent of those answering the questionnaire.

In future reports, DISTRIBUTION will correlate the length of time on the job and the level of education achieved.



# DIMENSION: THE WORKPLACE

Our survey paints an interesting picture of the distribution executive's workplace.

First, the executive's office tends to be close to the corporate flagpole and the production lines. Note on the accompanying chart that more than two-thirds of the respondents have offices at the company manufacturing site.

This is no surprise, since distribution is often seen as the last step in the production process.

About 45 percent of the respondents work at corporate administration or headquarters locations. (In many cases, a variety of operations are carried on at one site. This is why the percentages on the chart do not add up to 100 percent.)

As illustrated, most respondents work for companies which employ more than 100 people at the distribution executive's location. Significantly, more than a quarter of the respondents work at locations where over a thousand people are employed.

The distribution executive works with people, and people work for the distribution executive. More than two-thirds of the respondents work in distribution or traffic departments which number more than six employees.

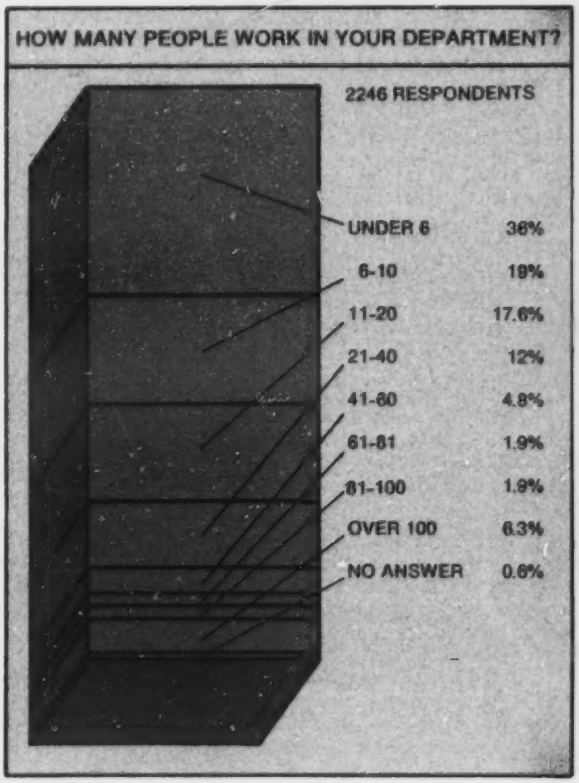
Of the respondents, an overwhelming 92.2 percent have employees who report directly to them. The majority of respondents, some 50.7 percent of them, manage between one and five employees.

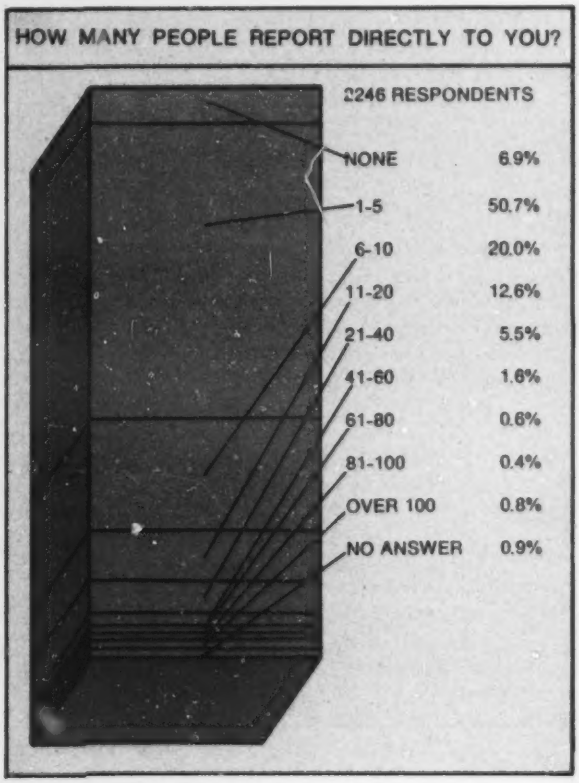
The distribution executive is computerized. Our survey found that 83.4 percent of the respondents have access to a computer.

However, the majority do not have a computer within their departments. Only 5.3 percent have their own departmental computer, while 75 percent use a computer that is elsewhere in the company.

Thus the picture of the distribution executive's workplace which emerges is one of a management location. The executive has physical access to the corporate production lines, and to the offices of the company's higher-level executives. He is a manager of people, with all of the opportunities and demands that entails. And he has the use of the computer.

In future issues, we will examine more closely how the executive makes use of this work environment.



# 1980

# THE DECADE OF CHALLENGE FOR THE DISTRIBUTION MANAGER

Economic uncertainties in the next decade will make the DM indispensable to any corporate team. He will have to plan distribution strategies on the basis of contingencies and react instantly to shifts in supply, demand and cost.

**By RICHARD A. LANCIONI,** Associate Professor of Distribution, Temple University

Economics has often been called the dismal science, but in the last 10 years it has become the most important concern for distribution managers. The reason is the unpredictability that has taken over a once rather stable economy. Business cycle theory used to be a relatively good basis upon which to make economic forecasts, but ever since the recession of 1973-74, the U.S. economy has been affected by numerous external and uncontrollable forces which has created economic situations that are not easy to deal with. *Ceterus parabis* (all things being equal) use to be a favorite assumption of economists when developing their forecasts. But such a consideration can no longer be used, for the external factors of energy boycotts, more government regulation, and the instability in international money markets has created uncertainty and made economic forecasting a hazardous business. Stagflation, for example, an economic condition which is characterized by rising prices and recession, was thought to be an economic impossibility, yet it occurred in the 1973-74 recession and may develop again in the early part of 1980. Increasing government regulation in environmental and job safety areas have made the cost of doing business increase. The rise and fall of the dollar's value have made U.S. exports more attractive in overseas markets, but at the same time has made the U.S. balance of payments deficit grow each month. The deficit for 1979 is expected to reach $14.3 billion, a rise of $2.2 billion over the 1978 level.

The decade of the 80s will be a period of change and slower growth for the distribution manager. While the economy will expand, it will do so at a slower rate. As shown in Figure I, GNP (the total value of all goods and services produced in the U.S. in a year) rose at an annual rate of 7 percent from 1970 to 1975. In the period from 1975-79 it increased by 5 percent per year to forecasted level of $2.3 trillion in 1979. From 1980 through 1983 the growth rate will fall to a forecasted yearly level of only 3 percent per year to more than $2.6 trillion in 1983. The slower growth means that firms will be producing less and distributing fewer goods.

The forecasted slower growth in GNP is expected to manifest itself in lower per capita personal and disposable income. This is demonstrated in Figure II which illustrates the rise in per capita personal income and per capita disposable income from 1970-1983. Personal income, or the amount in wages paid to workers, rose by 6 percent a year from 1970-75. The growth rate dropped somewhat from 1975-1979 rising by 5 percent a year. The expected decline can be seen in the forecasted rise from 1980-83 of only 4 percent per year. The same trend is ascertainable for disposable income, or the amount of a worker's wage left over after taxes. After rising by more than 5 percent per year through 1979 to $7150 per person, it is forecasted to increase by only 2 percent per year through 1983.

The slower growth trends in the general economy will require distribution managers to adjust their operations to deal with the expected slowdown. This will require more long range planning on the part of the distribution function within a company and necessitate the need for the slower expansion of transportation fleets, fewer warehouse sites, and lower inventories. As a distribution manager of a large chemical company stated "the decade of the '80s will be a real challenge for my firm. We expect to have to maintain lower inventories, for our customers just won't be buying as much as they did 5 years ago.

Also, my firm will be more concerned about the cost of capital and the rate of return projects will have for the company. It will be important for me to know the financial returns of any distribution projects I develop over the next five years. Our top management is and will continue to ask for a financial justification of any new distribution project. Five years ago all I had to do was ask that we add a new storage depot or buy a couple of additional trucks without anybody being concerned about pay off. No more. Now I have to justify all of my expenditures. The 1980s will make top management more aware of how they are going to spend their limited dollars and seek the highest possible return. The pressure is indeed on distribution managers to perform in 1980s."

For 1980, the trends as reported in DISTRIBUTION'S Distribution Index show some of the possible changes that are likely to occur. The cumulative index (Figure III) which since December, 1977 has been rising each quarter is forecasted to decline by 4.3 percent in the first quarter of 1980 over the last part of 1979. The result is based on a survey of more than 100 shippers concerning their distribution plans for 1980.

In the transportation sector of the economy, truck shipments are forecasted to decline by 3 percent in the 1st quarter of 1980 as compared to the last period of 1979 (Figure IV). This is the first negative decline in this area for more than two years. Rail shipments are also expected to decrease as well, with a forecasted decline of 2.1 percent in the first quarter of 1980 as compared to the last part of 1979. Air shipments, too, will fall by 1.1 percent along with water shipments. The general decline in the transportation sector is an indication of the beginning of the recession expected to occur during the first part of 1980.

The inflation rate is forecasted to average more than 14 percent in 1979. This increase is reflected in the 6.3 percent rise in inventory valuation in the last part of 1979.

Inventory valuation is forecasted to rise by 8.1 percent in the first quarter of 1980 over the last part of 1979.

One distribution manager who makes up the index panel stated the "Cost of our raw materials have increased more rapidly in the last six months, than in the past. It is difficult for my firm to keep up with the increases. We are hedge-buying now because everything in 1980 will cost more. The inflation rate is the single biggest unknown in our planning cycle."

Warehouse space utilization is also on the rise as demand slackens and inventories begin to rise. The Distribution Index forecasts a 4.2 percent increase in this area for the first part of 1980. The inventory buildup is further (Fig. VI) highlighted by the increases at the wholesaler and retailer levels. Inventory rose from a value of $130 billion in 1977 to a forecasted $198 billion in 1980, an increase of more than 34 percent for 3 years. Major declines are expected for materials handling expenditures. Shippers indicate that they will spend 4.1 per-

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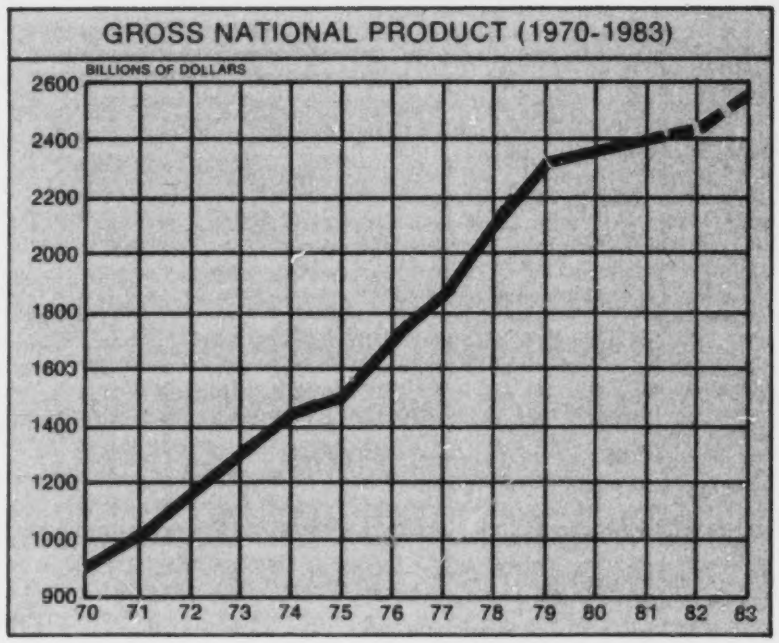


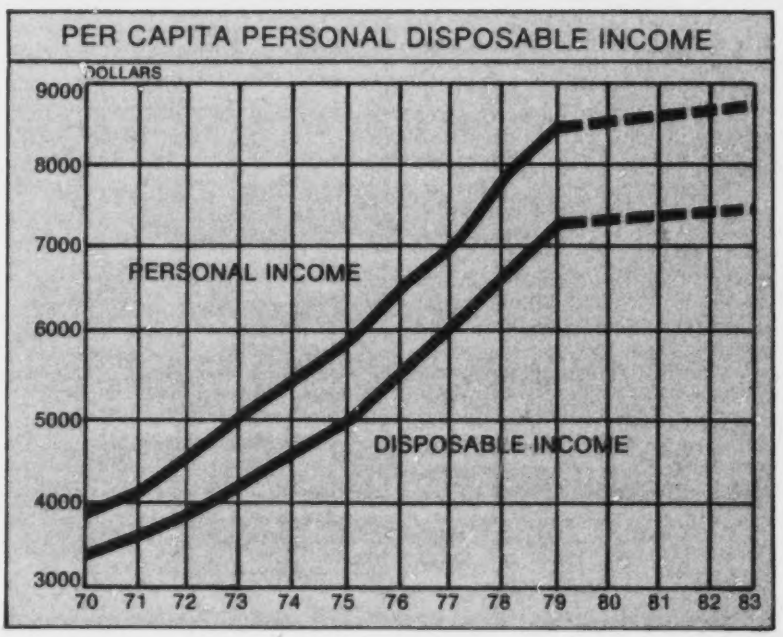

cent less for materials handling equipment in the first part of 1980 then they did in the last quarter of 1979.

Unemployment is also forecasted to rise in 1980. The national unemployment rate is expected to rise to a level of 7.5 percent in 1980. In the distribution sector shippers forecast a modest drop of 0.1 percent in employment among distribution personnel in the first part of 1980. The decrease is small, but the decline should become more substantial in the later part of 1980.

*Non-Economic Changes*

The 1980s will be marked by other changes that will make it a more uncertain period for the distribution manager. Fuel supplies will continue to be in short supply and the cost of fuel will escalate. This element will have to be factored into the planning horizon of a firm's distribution operation. Questions must be answered on how current customer service levels can be maintained? What types of consolidation and shipping programs must carriers develop for their shipper customers? What form will warehouse location configurations be like to service market demand in the light of the shortage of energy? Is private fleet operation feasible with rising fuel costs?

Another factor which will make the decade of the 80s a challenge for distribution managers is the pending changes in the regulatory structures of the rail and motor carrier industries. What types of service disruptions, if any, will result from deregulation? Will the cost of transport service increase because of it? Will shippers become the *captives* of motor and rail carriers? Will there be regional monopoly power for the carriers? Will there be regional monopoly power for the carriers? Will the short haul be elimi-

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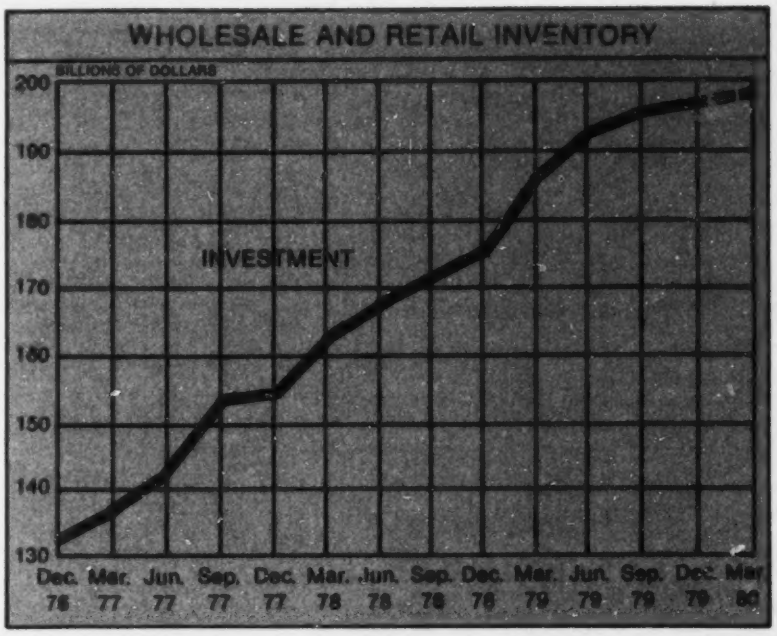
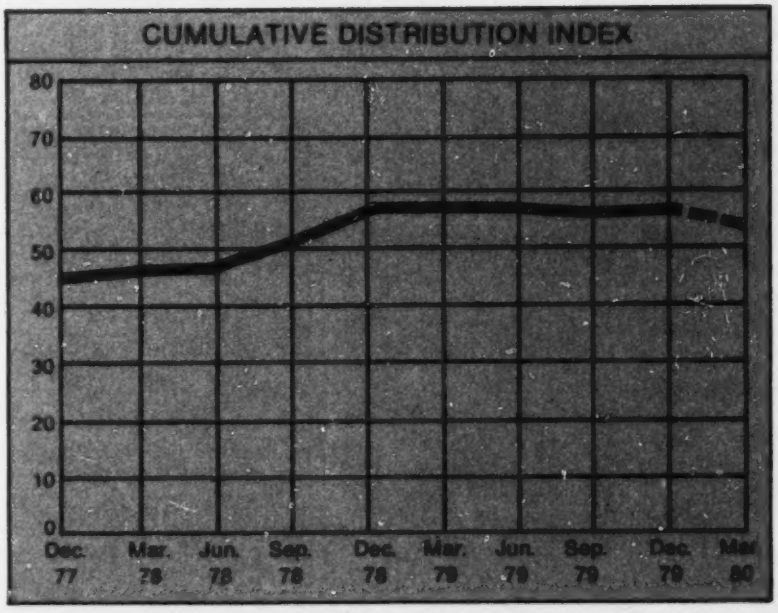



## TRENDS IN THE DISTRIBUTION INDUSTRY

(Percent change over previous quarter)

| Category | Fourth Quarter '77 | First Quarter '78 | Second Quarter '78 | Third Quarter '78 | Fourth Quarter '78 | First Quarter '79 | Second Quarter '79 | Third Quarter '79 | Fourth Quarter '79 | First Quarter '80 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rail Shipments | 1.6% | 1.2% | 2.0% | 1.8% | 1.9% | (.1%) | 0.9% | 1.0% | 2.1% | (2.1%) |
| Air Shipments | 1.8% | 1.6% | 2.1% | 1.8% | 1.5% | .5% | 2.3% | 2.1% | 1.0% | (1.1%) |
| Truck Shipments | 2.4% | 2.9% | 3.3% | 2.2% | 2.1% | 1.7% | 2.1% | 1.1% | 1.0% | (2.0%) |
| Water Shipments | .7% | .8% | .4% | .8% | .6% | 1.5% | 1.1% | .8% | (0.8%) | (1.0%) |
| Inventory Valuation | 2.6% | 2.8% | 3.1% | 4.1% | 4.9% | 5.8% | 6.1% | 6.2% | 6.3% | 6.1% |
| Warehouse Space Utilization | 1.1% | (.5%) | 1.2% | .4% | 1.0% | 1.6% | .9% | 3.1% | 4.4% | 4.2% |
| Equipment Expenditures | 1.3% | 1.1% | 1.8% | 1.2% | .9% | .2% | .1% | (.5%) | .4% | (4.1%) |
| Employment | .9% | .5% | .9% | 1.3% | 1.1% | (.3%) | (.3%) | (.3%) | .2% | (0.1%) |
| General Distribution Index | 2.9% | 2.9% | 3.2% | 2.5% | 2.8% | 1.8% | 1.8% | 1.8% | 1.8% | -4.3% |

# DISTRIBUTION COSTS FORECAST

By Dr. Bernard J. LaLonde, Riley Professor of Marketing and Logistics, and Martha Cooper, Research Associate, The Ohio State University

This new section was added to our annual survey of distribution career patterns *(See DISTRIBUTION, November 1979)*. Since inflation has plagued the distribution budgeting process, it was decided to survey distribution executives on their forecast of behavior for significant distribution cost components. Detailed cost forecasts by industry are presented below for 1979 to 1980, along with similar figures for forecasts made last year. It is significant for planning purposes that every key budget item was forecasted to increase during 1980 at a rate higher than for 1979.

## FORECASTED COST INCREASES BY INDUSTRY AND KEY BUDGET ELEMENT—1978 to 1979**

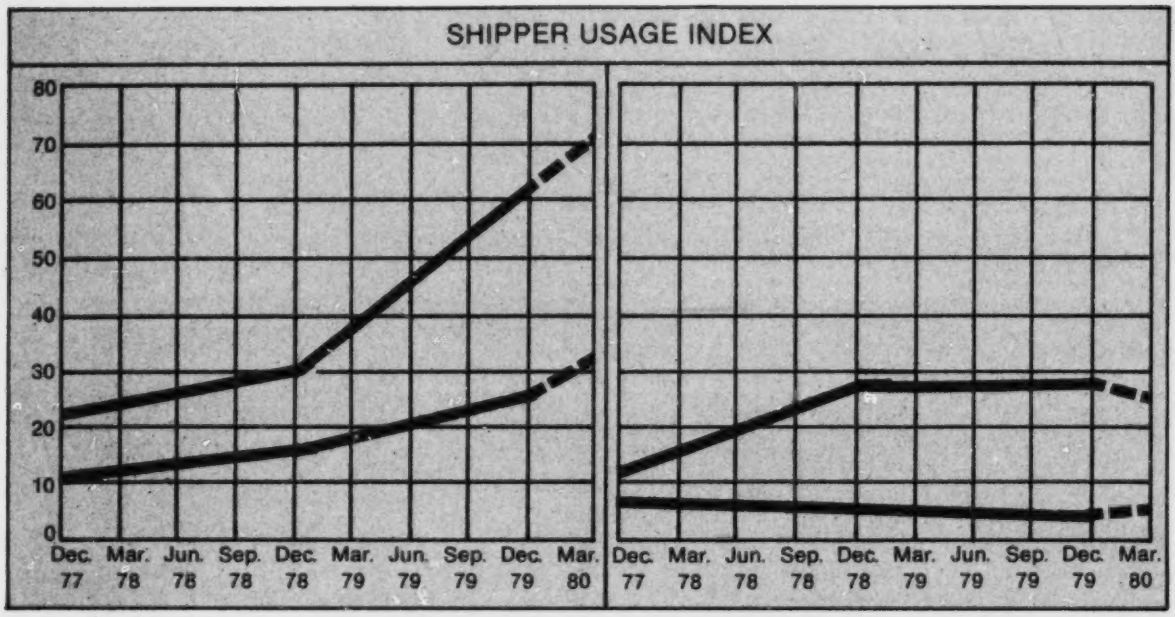
| KEY BUDGET ELEMENT | FOOD | CHEMICALS & PLASTICS | ELECTRONICS | APPLIANCES | PHARMACEUTICAL | PAPER | MACHINE TOOLS & MACHINERY | METALS & METAL WORKING | SPORTING GOODS |
|---|---|---|---|---|---|---|---|---|---|
| PRICES & RATES | | | | | | | | | |
| Motor Carrier-LTL | 13.6% | 13.7% | 11.1% | 14.1% | 12.0% | 14.2% | 8.0% | 12.3% | 11.3% |
| Motor Carrier-TL | 10.9% | 9.5% | 7.0% | 12.3% | 17.5% | 9.5% | 6.5% | 9.0% | 8.3% |
| Private Carriage | 9.3% | 8.2% | 5.0% | 11.0% | 9.5% | 10.5% | 5.0% | 8.0% | * |
| Contract Carriage | 10.4% | 11.5% | * | * | 9.0% | 8.6% | * | * | 8.1% |
| Railroad Rates-CL | 10.5% | 5.8% | * | * | 9.0% | 11.3% | * | 12.0% | 6.0% |
| Railroad Rates-Piggyback | 9.0% | 8.0% | * | 12.3% | 13.5% | 9.5% | * | 10.0% | 6.6% |
| Warehousing Costs-Corporate | 8.3% | 7.8% | 9.5% | 6.8% | 9.0% | 11.2% | 7.5% | 9.5% | 7.0% |
| Warehousing Costs-Public Warehouse | 8.4% | 7.6% | * | 6.0% | 12.5% | 10.0% | * | 6.5% | 7.0% |
| Small Shipments (under 500 lbs.) | * | * | 12.1% | 9.5% | 14.5% | 15.0% | 10.5% | 15.0% | 10.0% |
| Small Shipments (under 100 lbs.) | * | * | 12.0% | 9.2% | 16.5% | 15.0% | 7.0% | 16.5% | 8.7% |
| ACQUISITION, PROCUREMENT COSTS | | | | | | | | | |
| Average Cost Per Gallon-Diesel | 32¢ | 29¢ | 31¢ | 30¢ | * | * | * | * | * |
| Average Cost Per Gallon-Gasoline | 34¢ | 34¢ | * | 45¢ | * | * | * | * | * |
| Warehouse-Construction Cost | 11.1% | 21.7% | * | 7.5% | * | * | 15.0% | 14.0% | 12.5% |
| Warehouse-Heating/Cooling Expense | 11.8% | 15.7% | 9.0% | * | 15.0% | 15.0% | 18.0% | 10.0% | 12.5% |
| Trucking Cost-Lease Expense | 9.5% | 17.2% | * | * | * | 11.0% | 13.0% | 12.0% | 5.0% |
| Trucking Cost-Maintenance Expense | 9.4% | * | * | * | * | 10.0% | 8.0% | 15.0% | 10.0% |
| Material Handling-Pallets/Slipsheet | 12.3% | 14.5% | 11.0% | * | 15.0% | 6.0% | 7.5% | 8.5% | 8.0% |
| Material Handling-Lift Truck, etc. | 10.5% | 20.0% | 8.0% | 9.0% | 10.0% | 7.5% | 15.0% | 11.0% | 8.3% |
| TOTAL DISTRIBUTION EXPENSE | 9.8% | 8.1% | 10.8% | * | 9.5% | 11.0% | 8.5% | 12.0% | 11.3% |

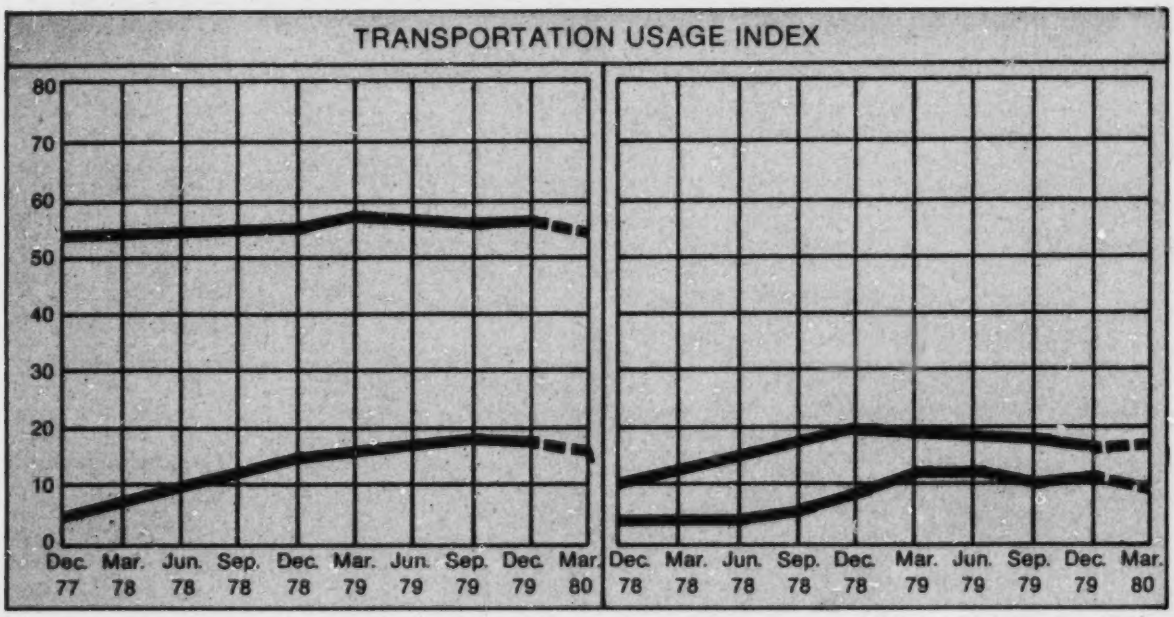
## FORECASTED COST INCREASES BY INDUSTRY AND KEY BUDGET ELEMENT—1979 to 1980**

| KEY BUDGET ELEMENT | FOOD | CHEMICALS & PLASTICS | ELECTRONICS | APPLIANCES | PHARMACEUTICAL | PAPER | MACHINE TOOLS & MACHINERY | METALS & METAL WORKING | SPORTING GOODS |
|---|---|---|---|---|---|---|---|---|---|
| PRICES & RATES | | | | | | | | | |
| Motor Carrier-LTL | 14.9% | 16.2% | 12.0% | 17.3% | 15.0% | 12.0% | 12.0% | 15.0% | 14.5% |
| Motor Carrier-TL | 13.2% | 11.6% | 8.5% | 13.5% | 15.2% | 7.0% | 8.0% | 10.3% | 11.3% |
| Private Carriage | 10.2% | 12.0% | 6.0% | 9.5% | * | 6.0% | 7.0% | 10.0% | * |
| Contract Carriage | 11.8% | 14.0% | * | 10.0% | 10.7% | 8.5% | * | * | 10.0% |
| Railroad Rates-CL | 11.7% | 10.6% | * | * | 10.0% | 11.5% | * | 12.0% | 6.0% |
| Railroad Rates-Piggyback | 10.5% | 9.5% | 12.0% | 10.6% | 13.3% | 9.0% | * | 12.0% | 8.0% |
| Warehousing Costs-Corporate | 9.7% | * | 9.5% | 7.5% | 10.0% | 11.0% | 9.0% | 12.5% | 9.0% |
| Warehousing Costs-Public Warehouse | 10.0% | 6.5% | 6.0% | 9.2% | 12.7% | 12.5% | * | 10.0% | 9.0% |
| Small Shipments (under 500 lbs.) | * | * | 9.3% | 12.5% | 15.0% | 15.0% | 15.5% | 17.5% | 12.0% |
| Small Shipments (under 100 lbs.) | * | * | 9.0% | 10.0% | 18.3% | 15.0% | 9.0% | 19.0% | 10.6% |
| ACQUISITION, PROCUREMENT COSTS | | | | | | | | | |
| Average Cost Per Gallon-Diesel | 26¢ | 25¢ | 21¢ | 24¢ | * | 41¢ | * | * | * |
| Average Cost Per Gallon-Gasoline | 27¢ | 18¢ | 32¢ | * | * | 32¢ | * | * | * |
| Warehouse-Construction Cost | 12.6% | 20.3% | 11.0% | 9.0% | * | * | 15.0% | 12.0% | 20.0% |
| Warehouse-Heating/Cooling Expense | 11.2% | 17.5% | 7.5% | * | 15.0% | 18.0% | 20.0% | 12.5% | 21.0% |
| Trucking Cost-Lease Expense | 9.9% | 15.0% | * | * | * | 17.5% | 14.0% | 15.0% | 15.0% |
| Trucking Cost-Maintenance Expense | 8.7% | 9.3% | * | * | * | 12.0% | 11.0% | 20.0% | 20.0% |
| Material Handling-Pallets/Slipsheet | 10.5% | 17.0% | 9.0% | * | 15.0% | 8.0% | 8.5% | 7.0% | 8.3% |
| Material Handling-Lift Truck, etc. | 10.1% | 13.8% | 8.3% | 9.3% | 10.0% | 10.0% | 14.0% | 13.5% | 10.3% |
| TOTAL DISTRIBUTION EXPENSE | 10.6% | 9.3% | 8.2% | * | 12.0% | 11.0% | 8.5% | 13.0% | 15.6% |

* Incomplete data

** Last day of 1979 to last day of 1980




nated and will the burden for short hauls fall on the shipper? What will be the employment impacts of deregulation on the distribution industry? Will traffic departments be larger or smaller? These and other questions will not be answered for a few years and the distribution manager will have the task of managing his operation in an uncertain environment. In the case of one distribution manager, the regulatory issue will not be an easy one to resolve. "For my company, the whole deregulatory situation is a bag of worms. We don't know what to expect? We ask our carriers and they don't know. We ask the regulators and they don't know. We even ask our lawyers and they don't even try to give us an answer. The 1980s should present more of the same until the whole issue is resolved. I don't know who is going to be regulated first, but whoever it is, it will take time for my company to adjust its service levels, accordingly. The whole deregulatory thing is without parallels and we will have to cope with it in the months to come." Good luck.

Forecasting and planning for the future is not an easy task, but with the high level of uncertainty emerging for the 1980s, distribution managers can not longer afford to be "brush fire managers." Coping with the changes in the 1980s should make the distribution manager's job one of the more important ones in American Industry in the decade ahead. ■

# NOTE

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Chilton's

JANUARY 1980

C 2150-1

# DISTRIBUTION Man of the Year:

EXCLUSIVE INTERVIEW WITH NEW ICC CHAIRMAN

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VOLUME 79, NUMBER 1

Chilton's

JANUARY 1980

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*The Cover: DISTRIBUTION Magazine's man of the year: Grant Arnold*

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DISTRIBUTION (USPS 158100), (ISSN 0195-7244), owned by Chilton Co., is published monthly at Chilton Way, Radnor, PA 19089 (215) 687-8200. Chilton Co. is a division of American Broadcasting Companies Inc., New York, N.Y. Controlled circulation postage paid at Philadelphia, Pa. ©**CHILTON COMPANY 1980**. Subscription rate: U.S. and possessions, $20 per year. Canadian, $30. Foreign, $40. Single issue $2.00 except Distribution Guide Issue—$20 per copy. Postmaster: Send form 3579 to DISTRIBUTION, P.O. Box 2105, Radnor, PA 19089.

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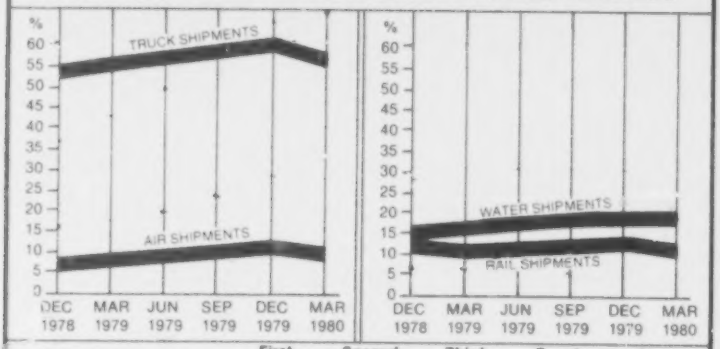


| CATEGORY | First Quarter '79 | Second Quarter '79 | Third Quarter '79 | Fourth Quarter '79 | First Quarter '80 |
|---|---|---|---|---|---|
| Truck Shipments | 1.7% | 1.5% | 1.1% | 1.1% | -3.0% |
| Air Shipments | 0.5% | 0.4% | 0.5% | 0.6% | -1.1% |
| Water Shipments | 1.1% | 0.6% | 0.2% | 0.2% | 0.1% |
| Rail Shipments | 0.1% | 0.2% | 0.3% | 0.3% | -2.1% |

*The first quarter of 1980 marks the beginning of a lackluster period for the U.S. economy.*

*Economists forecast a 12 to 14 percent inflation rate and an 8 percent unemployment rate by the end of the year.*

*The DISTRIBUTION Index is reflecting this slowdown for the first quarter with a 3 percent drop in truck shipments for the period. This is the first negative drop in this area in more than a year.*

*The decline is attributed to a decrease in demand at the consumer level for all types of products.*

*Air shipments as well are expected to drop by 1.1 percent. Again, this is the first decrease in the past five quarters.*

*Rail shipments are also expected to decline in the first part of 1980 by 2.1 percent.*

*The general decline in the transportation sector is a reaction to the beginning of the long-forecast recession that began in the last part of 1979. This downturn is expected to last for 12 to 15 months and will affect all sectors of the economy.*

*One manager in the Distribution Index survey stated, "My firm expected the downturn and we are adjusting our operations accordingly. What scares me personally is that while prices for durables are going down, the prices of the fuel and oil to make them is going up.*

*"Recession is an important issue, but energy independence is the issue for America. I hope this hostage situation in Iran teaches all of us managers something about international law and economics."*

# TMs SEE THEIR ROLE CHANGING

*This is the second in a continuing series of reports on the largest, most important survey of distribution executives ever done. The survey, done by questionnaire, called for information from more than 24,000 distribution and traffic managers and executives in U.S. manufacturing companies. A total of 2246 usable responses were received for a rate much higher than necessary—or expected—for statistical evaluation.*

An accurate prediction is nothing more than a guess which, by dumb luck, comes true.

Despite this, we asked distribution executives to—in effect—predict what parts of their jobs would become more important during the first three years of the Eighties.

The results are less important as a crystal ball tuned into the future than they are as a mirror reflecting the concerns of today. As proof of the near impossibility of accurately predicting the future, consider the past. In 1969, a full decade ago, could anyone have predicted the Arab oil embargo? The emergence of hyper-inflation?

On our survey questionnaire, we asked respondents to write in which areas of their jobs they expect would become more important during 1980-1983. Many respondents listed more than one area, which is why the figures shown add up to more than 100 percent.

As might be expected, the greatest number of write-in votes went to the area of "traffic."

What may be surprising is that top billing was also given to the areas of "costs" and "inflation." Respondents mentioned the analysis and control of inflating costs just as often as they mentioned "traffic."

Obviously, the spiral of inflation as it effects the cost of distribution weighs heavily on the minds of the respondents. Indeed, most felt inflation would be as important as the very basics of distribution during the next three years.

Inflation even edged out some other nuts and bolts considerations. In third place on the list were the areas of "transportation, routing and mode selection."

Because of the widely-reported trend towards increased management responsibility being taken on by distribution executives, it is not unusual to find the area of "management" high on the list of those which the respondents feel will become more important in the next three years.

It is significant to note that "international aspects" got a high rating, just behind "management." This confirms a variety of recent indications that U.S. manufacturing companies are looking harder at the export opportunity.

"Inventory control, analysis, planning" ranks next in the list. This is a growing area of involvement for the distribution executive, according to other figures garnered in the overall survey.

It's interesting to note that the next category, "distribution," is so far down on the list. Though its position indicates it is still quite important in the overall projections, one wonders why such a basic function would not rank higher.

Also note that "distribution" is obviously viewed as something quite different from "traffic," which won the top spot on the list.

With the furor of deregulation dominating the news, it is curious to find "government regulation, deregulation and legislation" as far down on the list as it appears. The same can be said of the next category of "rates, rate structure changes, rate negotiations."

The location of "data processing" on the list is interesting. Other information from the overall survey shows that more than two-thirds of those interviewed have access to a computer. However, the other data show less than a quarter of the respondents spend any time on data processing. From the accompanying list, we can project a relatively slow increase in the importance of data processing to the distribution executive.

The issues of "warehousing" and "private fleets" may seem low on the list. This is most likely a distortion, since not all of the respondents are involved in these areas due to the makeup of their company's distribution function.

It is odd that "customer service" didn't rank higher as an area which would become more important over the next three years.

In another segment of the overall survey, respondents said customer service headed the list of activities they were involved in.

The next four categories—"equipment availability, marketing and sales, non-private carriage and materials"—no doubt rank where they do because of somewhat more limited involvement by respondents in these areas.

The next category, however, involves everyone. In light of current developments in the Middle East and the gasoline lines of last summer, it is hard to understand why "energy, fuel" ranked so low in the list. Perhaps this is an indication of some fundamental optimism about the ability of the country to get the energy it needs.

The items bringing up the end of the list do so, no doubt, because the distribution managers as a group may have relatively little direct involvement in each item.

It may seem odd that "labor" is at the end of the list, until you remember that it is probably not the distribution executive who has to negotiate with either organized or unorganized labor. That function belongs to top management. ■

What area of your job do you see becoming more important during the next three years?
2246 wrote in responses

| PERCENT | AREA |
|---|---|
| 13.6 | Traffic |
| 13.6 | Costs, inflation |
| 12.1 | Transportation, routing, mode selection |
| 8.8 | Management |
| 8.1 | International aspects |
| 7.7 | Inventory control, analysis, planning |
| 7.2 | Distribution |
| 6.6 | Government regulation, deregulation, legislation |
| 5.6 | Rates, rate structure changes, rate negotiations |
| 5.1 | Data processing |
| 4.8 | Warehousing, warehouse management, warehouse distribution |
| 4.1 | Private fleets, private carriage |
| 3.6 | Customer service |
| 3.3 | Equipment availability, selection |
| 2.4 | Marketing, sales |
| 2.2 | Non-private carriage, carrier selection |
| 1.6 | Materials, materials management |
| 1.2 | Energy, fuel |
| 1.0 | Order processing |
| 0.7 | Site selection |
| 0.7 | Hazardous materials |
| 0.6 | Purchasing |
| 0.4 | Labor |

# NOTE

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Chilton's
FEBRUARY 1980

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FMC TAKES A HARD LOOK AT RAILCAR LEASING

THE OUTLOOK BRIGHTENS FOR SOLAR WAREHOUSES

DISTRIBUTION REQUIREMENTS PLANNING: INVENTORY CONTROL BY THE DM

FREIGHT CLAIMS IN PLAIN ENGLISH

PURCHASE

LEASE

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FEBRUARY 1980

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*The Cover: Lease or buy—a car-by-car decision that won't stop changing.*


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DISTRIBUTION (USPS 156100), (ISSN 0195-7244), owned by Chilton Co., is published monthly at Chilton Way, Radnor, PA 19089 (215) 687-8200. Chilton Co. is a division of American Broadcasting Companies Inc., New York, N.Y. Controlled circulation postage paid at Philadelphia, Pa. ©CHILTON COMPANY 1980. Subscription rate: U.S. and possessions, $20 per year. Canadian, $30. Foreign, $40. Single issue $2.00 except Distribution Guide issue—$20 per copy. Postmaster: Send form 3579 to DISTRIBUTION, P.O. Box 2105, Radnor, PA 19089.

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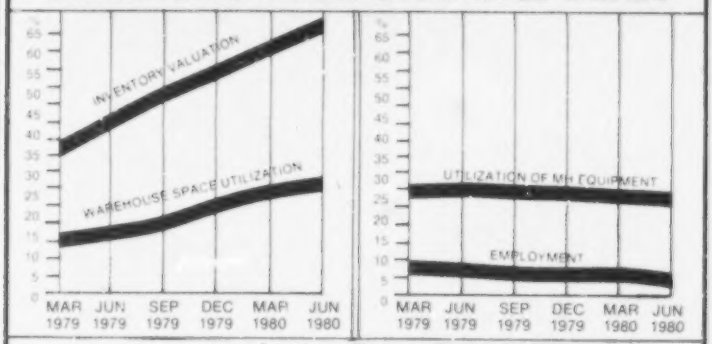


| CATEGORY | Second Quarter '79 | Third Quarter '79 | Fourth Quarter '79 | First Quarter '80 | Second Quarter '80 |
|---|---|---|---|---|---|
| Inventory Valuation | 6.1% | 8.2% | 6.3% | 8.1% | 5.7% |
| Warehouse Space Utilization | 0.8% | 3.1% | 4.4% | 4.2% | 3.1% |
| Equipment Expenditures | 0.1% | (0.5%) | 0.4% | (4.1%) | 0.0% |
| Employment | (0.3%) | (0.3%) | 0.3% | (0.1%) | (1.1%) |

*The Distribution Index projects a slowdown in economy for the second quarter of 1980. Inflation is expected to slowdown with the DI reporting a 5.7 percent rise in inventory valuation. This is less than the 8.1 percent expected in the 1st part of the year. The slowdown is due to the expected impacts of the recession as the various industrial segments begin to feel its effects.*

*Warehouse space utilization is also expected to moderate over the 1st part of the year, increasing by a forecasted 3.1 percent in the second quarter. Firms are beginning to slowly work off inventories built up in the last part of 1979. As one distribution manager stated in the survey, "Our business has fallen off drastically in the last 6 months and the company has slowed its production down. We have no interest in throwing more money at slow moving inventory."*

*The second quarter of 1980 will be a moderating period for the economy as a whole. Firms will begin to re-evaluate their expenditures for equipment for the balance of the year. In the survey of shippers comprising the Distribution Index, distribution managers reported no expected increase in expenditures in materials handling equipment during the period. As one distribution manager stated, "Our firm is in a holding pattern. We won't expand until we get some clear signs from our customers as to what their order commitments will be."*

*The Distribution Index reports a drop (1.1%) in employment in the distribution sector for the second quarter. This is due to the forecasted drop in unemployment on the national level expected in the latter half of 1980.*

# WHO DOES WHAT IN DISTRIBUTION

Ask a TM or DM who does all the work in his organization, and he'll probably thump a fist down on the table and say, "I do. Now get out of here; I'm busy."

According to this magazine's detailed survey of distribution professionals, that assessment is correct.

We polled more than 24,000 distribution executives, traffic managers and distribution managers in U.S. manufacturing companies and received 2,246 usable responses. This return rate was much higher than necessary—or expected—for statistical evaluation.

In one segment of the survey, we asked respondents to pinpoint who performs a variety of distribution functions (see table below).

The responses indicate that four management levels control the bulk of traffic and distribution. These levels are: general traffic manager, traffic/distribution manager, traffic/distribution supervisor, and traffic/distribution analyst.

The discretion afforded these four groups is so broad that they can be lumped into one category. Let's call it the "distribution echelon" for want of a better term.

By combining the percentages shown below for the four groups within the distribution echelon, we get a picture of who does what in distribution.

In only one instance—distribution budgeting—is the distribution echelon outranked by decision-makers in the corporate executive suites. In the remaining categories, the distribution echelon is decidedly in control of the functions shown.

For example, 84 percent of the respondents said carrier selection is performed by the distribution echelon. And 83 percent said domestic routing is performed by the echelon.

Here, in descending order, is how the respondents placed the performance of the distribution function in the bailiwick of the distribution echelon:

| FUNCTION | DONE BY ECHELON |
|---|---|
| Selecting carrier | 84 |
| Domestic routing | 83 |
| Selecting carrier mode | 80 |
| Expediting/tracing | 74 |
| Claims preparation | 72 |
| Rate negotiation | 70 |
| Rate challenges | 68 |
| Rate auditing | 65 |
| Freight classifying with bureaus | 62 |
| Export routing | 61 |
| Writing off claims | 60 |
| Import routing | 50 |
| Private fleet management | 40 |
| Public warehouse selection | 35 |
| Warehouse management | 30 |
| Distribution budgeting | 29 |
| Inventory management | 26 |

As the table shows, the distribution echelon makes the majority of decisions within the distribution function. Even in the exceptional case—distribution budgeting—the echelon runs a close second. Here, corporate top management and/or the vice president or director of traffic/distribution performs the function 31 percent of the time. The echelon performs it 29 percent of the time.

Though the distribution echelon scored relatively low in other categories such as warehouse management and inventory management, these percentages are still larger than those logged by any other management levels in the survey.

According to our survey, it is clear that top management not only delegates responsibility to the echelon but delegates authority to act, too.

Conversely, the executive suites of a majority of companies have left a large hunk of the business of distribution to the professionals in the echelon.

This broad discretion may, however, be a double-edged sword that cuts both to the good and the bad. Representatives of the distribution echelon frequently lament their difficulties in selling ideas to top management.

The survey indicates one possible cause for that difficulty: top management is not that involved with the daily workings of distribution. □

MANAGEMENT LEVEL AT WHICH TRAFFIC/DISTRIBUTION FUNCTIONS ARE NORMALLY PERFORMED

Total: 2,246 Respondents

| MANAGEMENT LEVEL AT WHICH FUNCTION IS PERFORMED | TRAFFIC DISTRIBUTION FUNCTIONS: Distribution Budgeting | Selecting Carrier Mode | Selecting Carrier | Domestic Routing | Export Routing | Import Routing | Expediting/ Tracing | Claims Preparation | Writing-Off Claims | Rate Auditing | Rate Negotiation | Rate Challenges | Freight Classifying With Bureaus | Public Warehouse Selection | Warehouse Management | Inventory Management | Private Fleet Management | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Corporate/Top Management | 17** | 3** | 2 | 2 | 5 | 5 | 1 | 2 | 8 | 5 | 6 | 7 | 8 | 9 | 8 | 8 | 7 | |
| Operating/Plant Management | 9 | 4 | 4 | 3 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 2 | 2 | 7 | 11 | 17 | 5 | |
| Marketing Management | 4 | 1 | a | a | 2 | 1 | 1 | a | 2 | a | a | a | a | 4 | 3 | 5 | a | |
| Purchasing Management | 3 | 1 | 1 | 1 | 2 | 6 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 3 | 3 | 6 | 1 | |
| VP or Director—Traffic/Distribution | 14 | 6 | 4 | 4 | 5 | 5 | 2 | 3 | 6 | 4 | 8 | 7 | 8 | 11 | 10 | 7 | 8 | |
| General Traffic Manager | 12 | 30 | 27 | 26 | 24 | 20 | 18 | 20 | 24 | 18 | 32 | 31 | 30 | 15 | 11 | 7 | 19 | |
| Traffic/Distribution Manager (1 location) | 13 | 26 | 28 | 26 | 18 | 14 | 19 | 18 | 19 | 14 | 21 | 18 | 16 | 14 | 14 | 13 | 14 | |
| Traffic/Distribution Supervisor | 3 | 17 | 21 | 21 | 13 | 10 | 20 | 18 | 10 | 13 | 11 | 11 | 9 | 4 | 4 | 5 | 6 | |
| Traffic/Distribution Analyst | 1 | 7 | 8 | 10 | 6 | 6 | 17 | 16 | 7 | 20 | 6 | 8 | 7 | 2 | 1 | 1 | 1 | |

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Chilton's

MARCH 1980

# TRANSPORTATION

C 2150-1

## FTZs Find More Shipper Appeal

## Transportation Legislation Update

## Squibb's New Order Entry System

## Transportation Cost Control: The Key to Successful Exporting

## Shippers' Casebook: Productivity Ideas in Action

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Chilton's

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**The Cover:** *Dockside, the point where U.S. and international trade cross.*

*Photo courtesy of the Port Authority of New York and New Jersey.*

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DISTRIBUTION (USPS 158100), (ISSN 0195-7244), owned by Chilton Co., is published monthly at Chilton Way, Radnor, PA 19089 (215) 687-8200. Chilton Co. is a division of American Broadcasting Companies Inc., New York, N.Y. Controlled circulation postage paid at Philadelphia, Pa. ©CHILTON COMPANY 1980. Subscription rate: U.S. and possessions, $20 per year. Canadian, $30. Foreign, $40. Single issue $2.00 except Distribution Guide Issue—$20 per copy. Postmaster: Send form 3579 to DISTRIBUTION, P.O. Box 2105, Radnor, PA 19089.

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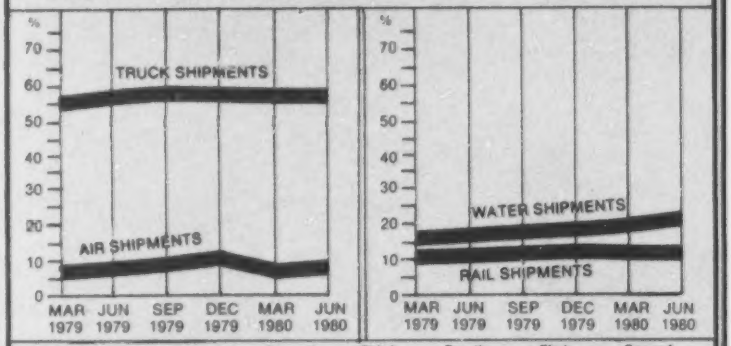



| CATEGORY | Second Quarter '79 | Third Quarter '79 | Fourth Quarter '79 | First Quarter '80 | Second Quarter '80 |
|---|---|---|---|---|---|
| Truck Shipments | 1.5% | 1.1% | 1.1% | -3.0% | 0.5% |
| Air Shipments | 0.4% | 0.5% | 0.6% | -1.1% | 0.1% |
| Water Shipments | 0.6% | 0.2% | 0.2% | 0.1% | 1.6% |
| Rail Shipments | 0.2% | 0.3% | 0.3% | -2.1% | 0.1% |

*The outlook for the second quarter of 1980 is mixed. Economists have not yet agreed on when the recession will begin. Inflation is still going strong, with consumer prices rising at an annual rate of 13.3%.*

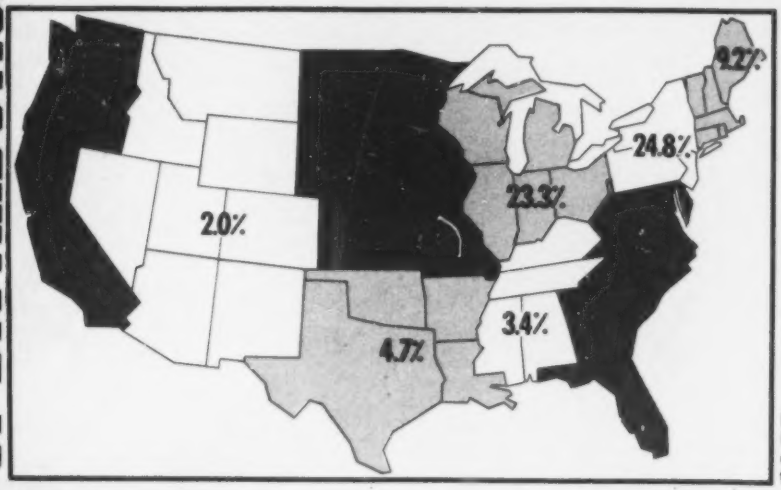
*The Federal Reserve Board's attempt to slow the economy has not yet succeeded, forcing the FRB to raise the discount rate to an all-time high of 13%. The hike has resulted in the prime interest rate increasing to a record 15¾%.*

*Many distribution managers surveyed in this quarter's DISTRIBUTION INDEX expressed confusion over what to expect in 1980. One distribution manager stated, "Everybody in my company forecasts gloom, but you would not know it by the way our customers are ordering. It's gangbusters."*

*The DISTRIBUTION INDEX forecasts a slight rise in activity for the second quarter of 1980. This is reflected in the transportation sector, with shippers reporting a .5% increase in rail shipments over the first quarter.*

*Air shipments will not increase appreciably either, rising by only .1%. Truck shipments are expected to rise by only 1.6% in the second quarter, with water shipments increasing only very slightly.*

*As one distribution manager stated, "We don't forecast any more. We just react to events and take each day as it comes."*




| FREIGHT BILL (of 790 ocean freight users) | |
|---|---|
| **Total, all modes** | |
| Under $400,000 | 12.7% |
| $400,000 to $699,999 | 9.6% |
| $699,999 to $999,999 | 9.4% |
| $1 million to $5 million | 32.0% |
| $5 million to $9 million | 9.9% |
| $ 9 million and up | 22.9% |
| No answer | 3.0% |

Map shows the distribution geographic of the 790 survey respondents who qualify as "heavy users" of ocean transportation for shipping.

## HOW SHIPPERS SPEND THEIR FREIGHT DOLLAR

American shippers go down to the sea in droves, according to this magazine's survey of distribution executives and managers.

Of the 2,246 respondents to DISTRIBUTION's poll of 24,000 distribution professionals, more than a third report that they are heavy users of ocean freight. The bulk of these ocean freight users work for manufacturing companies which have hefty total freight bills, and substantial segments of those freight bills are paid out for ocean shipping.

The ocean freight shipper is distinctive in many ways, our survey indicates. Let's take a look at the "heavy" user of ocean freight.

For the survey, we defined "heavy ocean freight user" as any shipper who spends 4 percent or more of his freight dollar on ocean shipping. Our survey netted 790 respondents—35 percent of all respondents—who fit into this category.

Not surprisingly, the majority of these shippers are located in the industrial Mid-Atlantic states and the agricultural and industrial shipping centers of the Midwest. As the accompanying map illustrates, 24.8 percent of the ocean freight users are located in shipping points in New York, Pennsylvania and New Jersey. Another 23.3 percent are found in the Midwestern states adjacent to the Great Lakes.

Of the 790 heavy users of ocean freight, our survey found that the average user allocates 16.2 percent of his total freight bill to ocean shipping.

The size of these shippers' total freight bills is illustrated in the chart on this page. The largest single group—shippers with total freight bills ranging from $1 million to $5 million—comprise 32 percent of the users sampled. The second largest group is made up of the biggest shippers, in terms of total freight bill: Some 22.9 percent of all heavy users of ocean freight reported that their total freight bills were in excess of $9 million annually.

Third largest were shippers with total freight bills of less than $400,000. Interestingly, 12.7 percent of our sample fit into this category. These smaller shippers utilize ocean freight more than some of their bigger brothers, namely those with freight bills ranging from $400,000 to $700,000 and from $700,000 to $1 million. Indeed, the smallest shippers, in terms of total freight bill, outranked companies with freight bills totaling between $5 million and $9 million.

What kinds of companies are these? Our survey shows that they represent a broad cross section of U.S. industry. The largest categories, by type of product or service, are makers of chemicals and allied products (15.3 percent), electrical and electronic machinery (14.4 percent), non-electrical machinery (12.4 percent) and food and kindred products (10.8 percent).

Of those 790 heavy users of ocean freight surveyed, 63 percent are directly responsible for purchasing freight forwarders' services. Only 5.4 percent said their companies do not purchase freight forwarders' services. The remaining 31.6 percent said other departments handle such purchasing.

Similarly, customs brokers are heavily relied upon by the respondents. Some 49.2 percent of those surveyed are directly responsible for securing the services of customs brokers. Only 4.3 percent of the respondents say their companies do not use customs brokers.

The heavy users of ocean freight surveyed spend an average of approximately $500,000 each year on ocean freight, our survey indicates.

As large as this expenditure is, it is not the respondents' biggest transportation cost. While these heavy users of ocean freight spent an average 16.20 percent of their freight dollar on ocean shipping, they spent more on rail (20.2 percent of their total freight bill), and still more than that on regulated common carriage (56.38 percent). The same group spends an average of 11 percent of their freight bill on air freight.

Statistically speaking, therefore, the "average" heavy user of ocean freight is a chemical company, located on the Ohio-Pennsylvania border, with a total freight bill of $3 million annually, of which $490,000 is spent on ocean freight. □

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46, 75-77.

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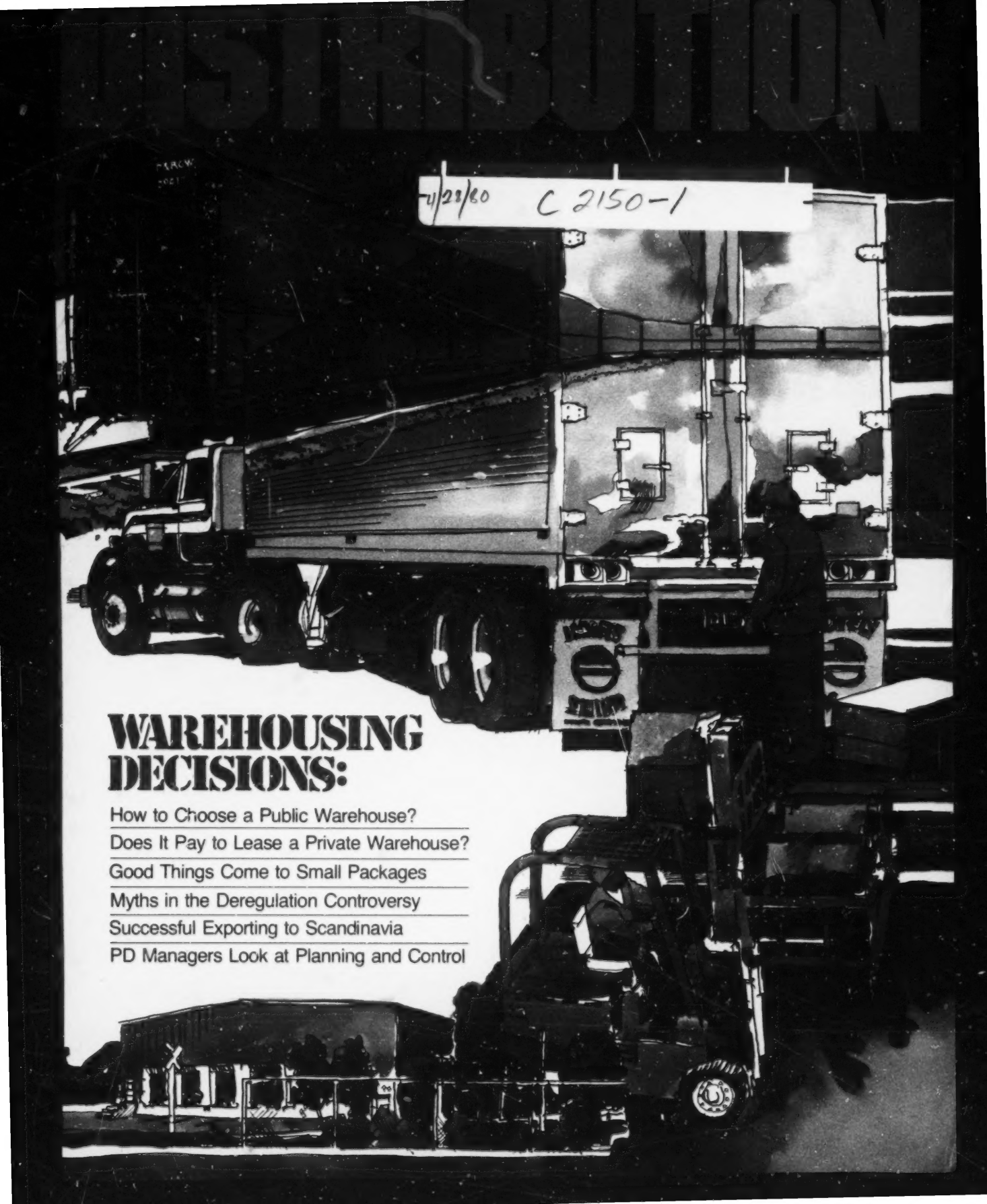

# WAREHOUSING DECISIONS:

How to Choose a Public Warehouse?

Does It Pay to Lease a Private Warehouse?

Good Things Come to Small Packages

Myths in the Deregulation Controversy

Successful Exporting to Scandinavia

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VOLUME 79, NUMBER 4

Chilton's

APRIL 1980

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**The Cover:** *The hubbub of activity in a warehouse is echoed by the intense activity behind choosing a public warehouse or in deciding whether to lease or to purchase a public warehouse.*

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DISTRIBUTION (USPS 158100), (ISSN 0195-7244), owned by Chilton Co., is published monthly at Chilton Way, Radnor, PA 19089 (215) 687-8200. Chilton Co. is a division of American Broadcasting Companies Inc., New York, N.Y. Controlled circulation postage paid at Philadelphia, Pa. ©CHILTON COMPANY 1980. Subscription rate: U.S. and possessions, $20 per year. Canadian, $30. Foreign, $40. Single issue $2.00 except Distribution Guide Issue—$20 per copy. Postmaster: Send form 3579 to DISTRIBUTION, P.O. Box 2105, Radnor, PA 19089.

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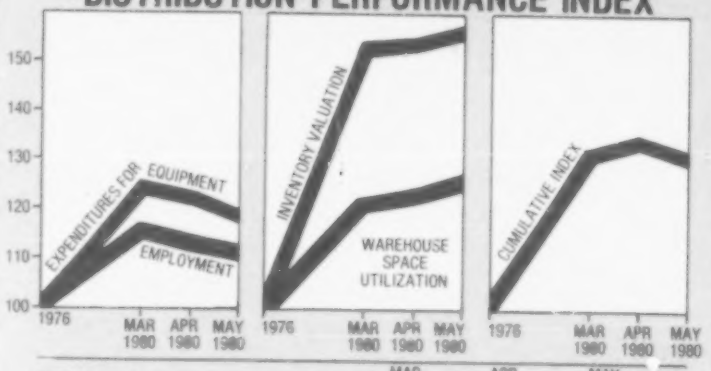
# DISTRIBUTION PERFORMANCE INDEX




| CATEGORY | 1976 | MAR 1980 | APR 1980 | MAY 1980 |
|---|---|---|---|---|
| Expenditures for equipment | 100 | 123.3 | 122.2 | 119.9 |
| Employment | 100 | 115.3 | 112.0 | 111.0 |
| Inventory valuation | 100 | 152.3 | 153.1 | 155.0 |
| Whse. space utilization | 100 | 121.1 | 122.5 | 125.0 |
| Cumulative index | 100 | 131.3 | 134.0 | 131.0 |

Beginning with the April installment of the DISTRIBUTION INDEX, performance figures are shown as index numbers rather than percentages. Also, changes are now reported on a monthly basis rather than quarterly. The base year for the index is 1976. This means performance figures for the various segments of the distribution industry were set at 100 in 1976. The current index numbers reflect changes relative to these levels. We hope the index figures will make the DISTRIBUTION INDEX easier to understand and more useful.

---

*The economic news for the month of April and May indicates that the economy is in for more of the same—spiraling prices and rising interest rates. The predicted economic slowdown is finally beginning but economists feel that it may be longer and deeper than originally anticipated. Activity in the distribution industry is and will continue to slowdown during the two month period. The index for the month of April, 1980 will reach 134.0, a small increase over March's level of 131.3, but it is forecasted to drop to 131.0 in May, signaling the beginning of the anticipated slowdown. The current slowdown has taken a long time to materialize, for the economy fell off slightly in the latter part of 1979, only to make a moderate rebound in early part of 1980. Key indicators of activity in the distribution continue to show signs of decay. Expenditures for materials handling equipment for example has declined steadily since March, 1980 falling from a level of 123.3 to a forecasted 119.9 in May. Employment in the industry has likewise fallen from a level of 115.3 in March to a forecasted May level of 111.0. As one distribution manager stated "Laying off somebody is not easy for me to do. It seems that our employees become victims of the economic system. It becomes a necessary evil during periods of slowdown."*

*The inventory valuation index for the April-May period indicates that shippers are continuing to raise prices. Inventory valuation rose from a March level of 152.3 to a forecasted level of 155.0 for the month of May, 1980. Warehouse space utilization continues to increase with shippers forecasting it to reach the 125.0 level in May. Warehouse space utilization is forecasted to be lower in May than in April. The reason for this change is that shippers are holding their inventories down because of high interest rates. As one distribution accountant stated in the survey "We just can afford to finance high service levels anymore. Customers will just have to wait for delivery. If not, to hell with them."*

*The April index reports that shippers are extremely skeptical about the future. They are uncertain about which way to go and are in a holding pattern with regard to their inventories and distribution activity. Customer service seems to be the critical element in distribution planning in the second part of year. Previously established service levels may have to be changed in light of the current economic slowdown.*

## WHO USES WHAT IN WAREHOUSING?

The shortest distance between a manufacturer and a consumer is a line that inevitably runs through a warehouse. It's a rare widget that pops off the assembly line to immediately board transportation which takes it directly to a customer.

DISTRIBUTION's survey of 2246 distribution professionals in U.S. manufacturing found that different industries use private and public warehousing in differing mixtures. Though this conclusion is hardly a surprise to anyone, the specifics of which industries use each type of warehousing may offer some insights.

Overall, 57 percent of the respondents said their companies operate one or more private warehouses. And 60 percent of the same group noted their companies use public warehouses.

A look at specific industry groupings, however, shows diversity in the use of warehouses, both private and public.

For example, the heaviest users of both private and public warehouses are in the food and tobacco industries. Of all respondents, 347 fit into the food and tobacco category. Some 64 percent of this group said their companies operate private warehouses, while 81 percent said their companies use public warehouses.

The seasonality of food distribution, due to the growth seasons as well as fluctuating demand, logically calls for heavy use of public warehouses on an as-needed basis. The high degree of operation of private warehouses is likewise expected, since food storage often requires strict temperature controls and rigid, regulated standards in warehousing.

At the opposite end of the warehousing spectrum are the durable goods industries—makers of metal, metal products, non-electrical machinery and transportation equipment. Some 541 respondents said their companies fit this category. Of these, 44 percent said their companies operate private warehouses and the same percent—44—said they use public warehouses.

Once again, the figures are less of a surprise than they are a confirmation of what should logically be expected. The durable goods made by these manufacturers are usually built during long lead times between the order and the delivery of product.

Between these two categories lies the remainder of U.S. manufacturing industries. As we move from one industry to the next, the percentages see-saw back and forth between private and public warehouse use.

As the accompanying table shows, however, there is usually a correlation between use of private and public warehousing.

For example, the chemicals, petroleum, rubber-plastics, stone, clay and glass group of manufacturers are heavy users of both public and private warehousing.

This group is comprised of 560 respondents, 64 percent of whom say their companies operate private warehouses and 70 percent of whom say their companies use public warehouse space.

In terms of percentage use, the next ranking group of industries includes companies dealing in lumber, wood, furniture, paper, printing and publishing. Of 302 respondents in this category, 61 percent use private warehouses and 61 percent use public warehouses.

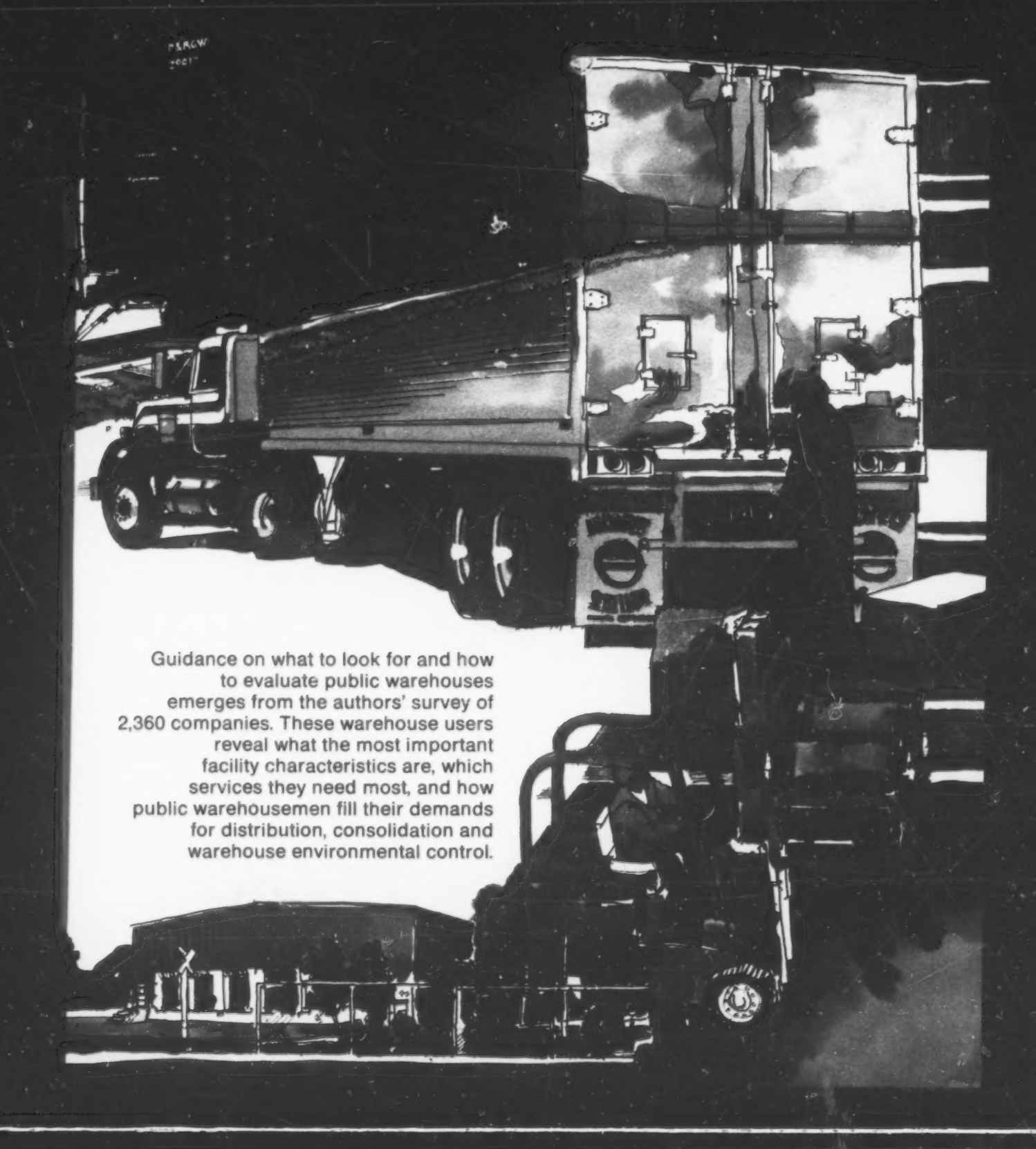
The group made up of textile, clothing and leather manufacturers violates the correlation of warehouse use. The 122 respondents in this group are comparatively heavy users of private warehousing (65 percent) and light users of public warehousing (41 percent).

Elsewhere in this issue are dissertations on public warehousing (page 42) and leasing of warehousing (page 51). As these articles indicate, the distribution professional who is looking into warehousing tends to think in terms of public *versus* private warehousing.

That adversary situation applies only during the decision-making process, our survey indicates. Once the decision is made and the time comes to get to work, U.S. manufacturers think of private and public warehousing, combined. □

### WAREHOUSE USE BY INDUSTRY

| Respondent Industry | Base (#) | % of respondents saying their company: Operates Any Private Warehouse | Uses Any Public Warehouse |
|---|---|---|---|
| Total Respondents | 2,246 | 57% | 60% |
| Food/Tobacco (SIC 20, 21) | 347 | 64% | 81% |
| Textiles/Clothing/Leather (SIC 22, 23, 31) | 112 | 65% | 41% |
| Lumber and Wood/Furniture Paper/Printing and Publishing (SIC 24, 25, 26, 27) | 302 | 61% | 61% |
| Chemicals/Petroleum/Rubber-Plastics/Stone, Clay, Glass (SIC 28, 29, 30, 32) | 560 | 64% | 70% |
| Metals/Metal Products/Non-Electrical Machinery/ Transportation Equipment (SIC 33, 34, 35, 37) | 541 | 44% | 44% |
| Electrical Machinery/ Measuring, Analyzing, Photographic Equipment (SIC 36, 38) | 294 | 54% | 55% |
| Miscellaneous Manufacturing/ Other (SIC 39) | 250 | 53% | 53% |



Guidance on what to look for and how to evaluate public warehouses emerges from the authors' survey of 2,360 companies. These warehouse users reveal what the most important facility characteristics are, which services they need most, and how public warehousemen fill their demands for distribution, consolidation and warehouse environmental control.

By **JAMES R. STOCK**, Ph.D, Assistant Professor of Marketing, University of Notre Dame
and **EARL A. CARRARA**, President, USCO Services, Inc.

In *Distribution Worldwide*, May 1974, Professor Bernard J. LaLonde reported the results of a study designed to learn from the users of public warehousing what factors were important in the decision process relative to the use of public warehousing space. Dr. LaLonde presented his conclusions in the form of four propositions:

**Proposition #1:** There will be significant changes in user demands of the public warehouseman during the 1970s.

**Proposition #2:** The public warehousing selection decision on the part of the user is becoming an increasingly sophisticated decision both in a financial and systems context.

**Proposition #3:** The public warehousing industry will grow to the extent that public warehousing operators help customers solve distribution problems in an economical and efficient manner.

**Proposition #4:** The public warehouseman must view himself both in business philosophy and business operations as an extension of his customers distribution systems.

Supported by a recent study of public warehousing users and non-users completed by the University of Notre Dame, the conclusions reported by Professor LaLonde seem just as appropriate today, some six years later.

This article is part of a comprehensive study recently completed which examined the status of the public warehousing industry. The portion of the study reported on in this article focuses on what users and non-users thought about the services offered by the public warehousing sector.

A total of 2,360 firms were asked to identify their perceptions on such issues as the cost of public warehousing relative to other warehousing alternatives, the importance of various distribution services in the selection of a public warehouseman and identification of public warehousing companies that could be considered "leaders" in the industry.

Because of concern over the future of the public warehousing industry due to inflation, energy shortages, government regulation, general economic uncertainty, and other factors, it was felt that the firms surveyed in this study should be those companies projected to exhibit real growth during the early part of the 1980s.

Those growth industries (and firms) would, by necessity, require additional warehousing services during the next several years. From the perspective of a public warehouseman, those industries would represent the "future" markets for the public warehousing industry.

Generally, most respondents felt that public warehousing costs more or else they didn't know. Usage level did not appear to change that perception, although many regular users of public warehousing perceived that it costs less (32.0%) or costs about the same (29.3%).

This is particularly informative in that as usage level increases, the public warehouse user finds that alternative equally as attractive as private warehousing. In many instances the public warehouseman can provide storage space (plus other services) cheaper than a private facility.

## FACILITIES

Many studies of public warehousing have asked companies to rate the importance of various services, products, etc. Unfortunately, such information is not always useful to the public warehouseman because it is difficult to determine with a "level of importance" measure whether or not a potential customer will or will not use a public warehouse if the service or characteristic is absent or lacking.

In the mail survey used in this research study, respondents were asked to indicate the necessity of each item, using a three-point scale: Absolutely necessary; Important, but not absolutely necessary; and Not important and not necessary.

The use of such a scale would indicate whether a firm would consider public warehousing if a specific service or characteristic was or was not present. Obviously, for those present and potential customers of public warehousing it is important that the company offer those services/characteristics rated by their target markets as "Absolutely necessary."

Table 1 shows perceptions of the importance of nine facility characteristics.

Potential public warehousing customers consider the protection of their product extremely important, as evidenced by the large number of respondents who considered sprinkler systems and security systems as being absolutely necessary or very important.

A significant portion of the survey respondents considered the availability of pallet racks and special handling equipment as important and/or absolutely necessary.

With respect to location, a significant minority of companies felt that a suburban location was superior to a downtown location.

Many public warehouses presently do not offer office space on premises, although 11.0 percent of public warehousing customers felt that the availability of office space was absolutely necessary.

## SERVICES

In recent years, the public warehouseman has evolved into a company which provides many distribution services in addition to product storage. Table 2 identifies some of the more important warehouse services which customers are demanding and which the modern public warehouseman is offering more frequently.

Lease of specific blocks of space, pool distribution, shipment consolidation and preventive sanitation programs were considered important by public warehouse users and nonusers. Temperature and humidity control systems were also considered very necessary by the potential target industries.

An ability to handle hazardous materials and store bulk commodities was thought necessary by a significant number of firms. However, for most public warehousemen, additional facility expense would be required to store/handle such materials. Also, the impact that those types of products being stored would have on existing customer's products is unknown. A potentially negative effect might result.

Packaging and labeling capability is considered to be absolutely necessary by almost 20 percent of the responding firms. There is a concept in marketing called "functional shiftability" which states that marketing/distribution functions can be shifted within the channel of distribution but cannot be eliminated. Traditionally manufacturers have packaged and labeled their prod-

ucts in-plant. However, with the proliferation of products (sizes, styles, assortments, branded and unbranded) in recent years, manufacturers have been forced to carry larger amounts of inventory in order to effectively service their customers.

Because the public warehouseman is generally a "step closer" to the final customer in the channel of distribution, it is possible for him/her to assume the packaging/labeling function and thereby reduce the total amount of manufacturers' inventory while at the same time improving order cycle time (through quicker response time). Presently, very few public or private warehousing operations have a packaging/labeling capability. This is a need that exists in almost every industry.

## TRANSPORTATION

Five aspects of transportation service are identified in Table 3. Although respondents felt that it was a definite advantage for a public warehouseman to own or manage local cartage service, the presence of good working relationships with the various transport modes was considered sufficient.

Generally, good rail service was perceived to be less essential than good motor carrier service. In fact, a majority of respondents felt that access to good rail connectors and direct service by a specific rail line were not important and not necessary in their decision to select a public warehouseman.

Over two-thirds of the respondents indicated that the availability of warehouse-owned or -managed local cartage was important or absolutely necessary. Control over local cartage can be a significant marketing advantage in a highly competitive market.

## CLERICAL SERVICES

Table 4 shows that clerical services were extremely important to those firms considering the use of public warehousing.

As mentioned earlier, the modern public warehouseman provides much more than storage space. Increasingly, the users of public warehousing are demanding a variety of clerical services that traditionally were performed elsewhere in the

TABLE 1 **IMPORTANCE OF FACILITY CHARACTERISTICS IN SELECTING A PUBLIC WAREHOUSEMAN**

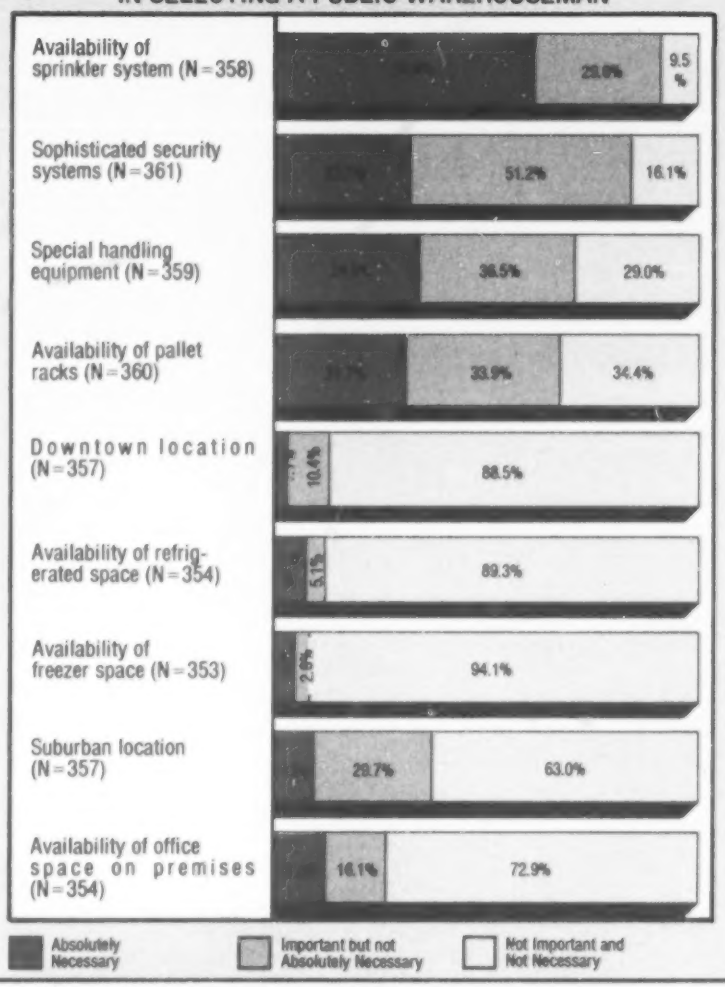



TABLE 3 **IMPORTANCE OF TRANSPORTATION SERVICES IN SELECTING A PUBLIC WAREHOUSEMAN**

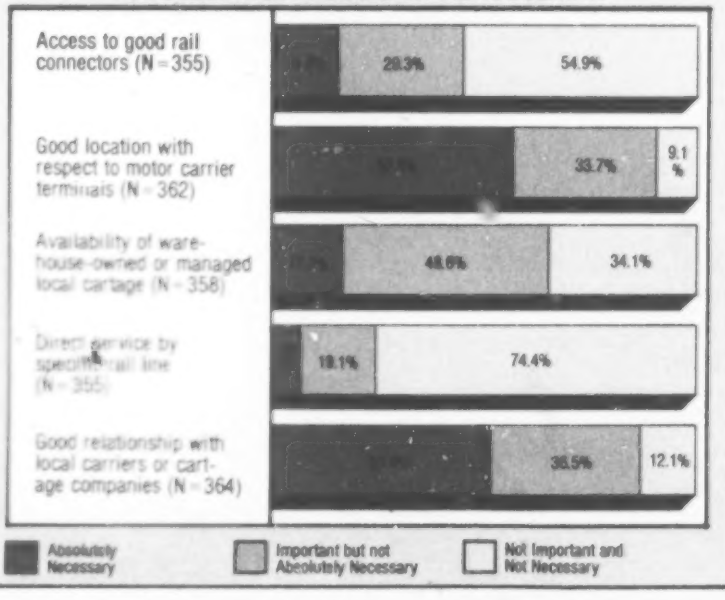
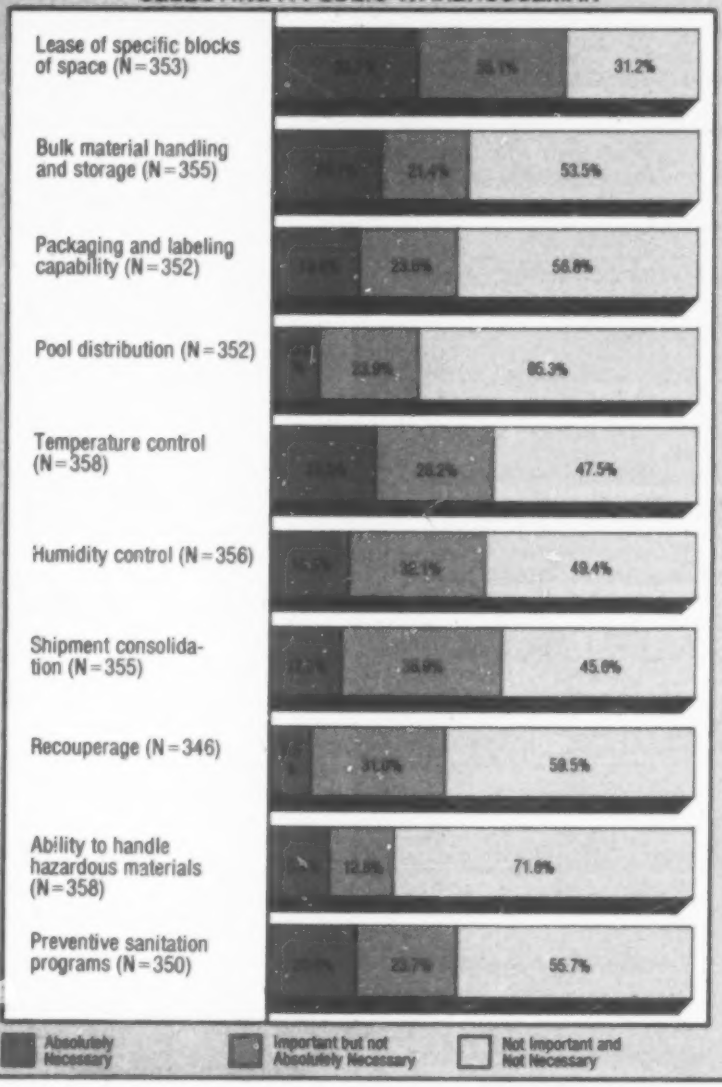


TABLE 2

## IMPORTANCE OF WAREHOUSE SERVICES IN SELECTING A PUBLIC WAREHOUSEMAN




MODE USAGE OF RESPONDENT FIRMS

| Mode | Number of Firms Using Mode | | Mode | Number of Firms Using Mode | |
|---|---|---|---|---|---|
| Common or Contract Motor Carrier | 408 | 75.7% | UPS/Parcel Post | 321 | 59.6% |
| Common Rail Carrier | 114 | 21.2% | Private Carrier | 179 | 33.2% |
| Assigned/Owned Rail Fleet | 18 | 3.3% | Freight Forwarder | 155 | 28.8% |
| Common or Contract Air Carrier | 212 | 39.3% | Other | 49 | 9.1% |

channel of distribution (the concept of "functional shiftability").

Firms require a lot more information today than in past years—and a lot more sophisticated information too. The availability of computer equipment "on-site" is a definite "plus" factor.

A computer software system, supported by the appropriate hardware, will become even more important in the future as the public warehouseman assumes more clerical functions. The optimal system should have the capacity to perform traffic management functions (rating, routing, mode/carrier selection), inventory control (report inventory levels, prepare out-of-stock reports) and accounting functions (billing, payments).

### MISCELLANEOUS

Most companies do not consider public warehousing cost as the sole criterion for selecting a particular warehousing firm. Service factors, as indicated previously, are vitally important to today's public warehouse user.

Of course, costs are still very important and will continue to be, given the need for firms to be cost efficient in order to remain competitive.

As shown in Table 5, there are advantages of being the public warehouseman with the "lowest rates in town," but not all firms select the cheapest warehouse in which to place their products. What is important is that a public warehouseman be competitive with its rates and if they're higher, be able to cost justify them to prospective clients.

Related to this item is an ability to provide rate quotations on any basis. At a minimum, a public warehouse should be able to quote rates on a square foot, pallet or cubic foot basis.

However, few warehousemen quote rates for basic storage, storage plus all the extra services, *or* the services alone. Today, an automobile purchaser can buy the car of his/her choice with no options, with every option or anywhere in-between. They also know exactly how much each option will cost and they can then make an intelligent, rational decision on which option(s) to purchase.

TABLE 4

**IMPORTANCE OF CLERICAL SERVICES IN SELECTING A PUBLIC WAREHOUSEMAN**

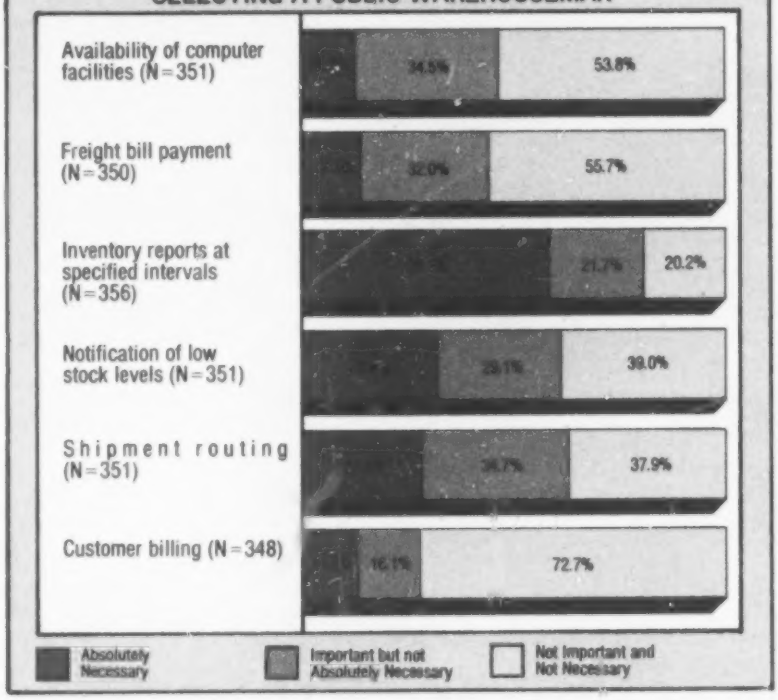
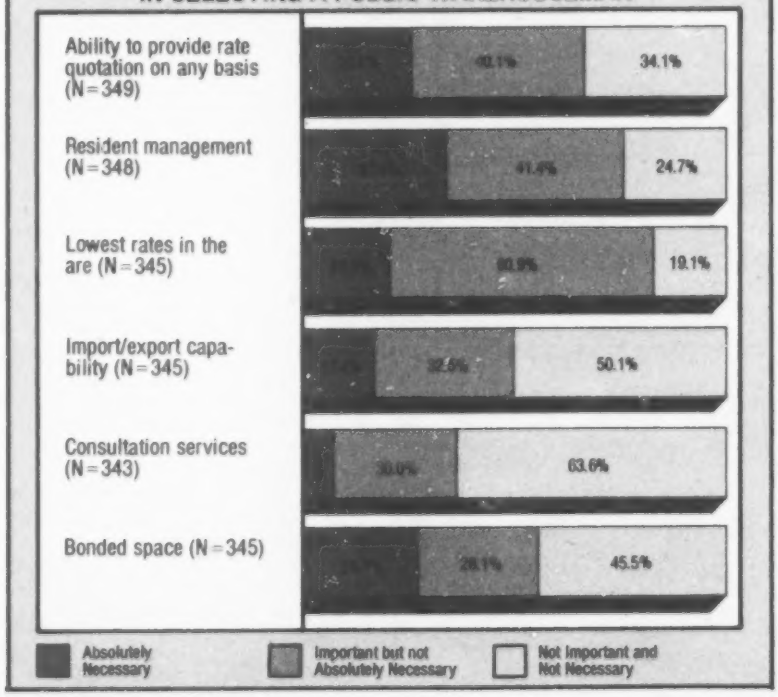



TABLE 5

**IMPORTANCE OF MISCELLANEOUS FACTORS IN SELECTING A PUBLIC WAREHOUSEMAN**




In most public warehouses, the buyer (user firm) generally orders his "car" in only two ways—basic storage only or basic storage plus all the options. There usually is no in-between. Such a situation is analogous to Henry Ford's statement of several decades ago: "You can have any color you want . . . as long as its black!" Many users of public warehousing are paying for services they don't need and some companies would rather place their products in public warehouses that offer less services than they really require, but at a lower price.

The philosophy of "one price fits all" is fast becoming obsolete. The public warehouseman of the future will have a price list which specifically identifies the various rates being charged for each of the services being offered. Adoption of such a pricing strategy by a firm in today's market would place that public warehouse in a leadership position within the industry.

The availability of resident management and consultation services is looked upon favorably by the potential target industries. Additionally, the availability of bonded space and import/export capability were considered vital by almost one-half the respondents.

## IMPLICATIONS

Public warehousing is a highly competitive, fragmented industry that will continue to demand the most from those companies attempting to remain or become leaders in the industry. When respondents were asked to identify the public warehousing companies they considered "leaders" in the industry a total of 91 firms were mentioned. In no instance was any public warehouseman mentioned by more than a half-dozen respondents. It would appear that significant opportunities exist for enterprising and dynamic public warehousemen to penetrate the warehousing market.

The role of the public warehouseman will continue to evolve during the decade of the 1980's. The modern public warehouse must continue to expand its product/service offering by providing additional services to its customers and assuming non-traditional warehousing functions—customer billing, packaging and labeling, and others. ■

# PD MANAGERS LOOK AT PLANNING AND CONTROL

**Physical distribution managers are all for sophisticated finance, economics and computer tools for management. But they have trouble understanding the computer experts and are unsure of how some of the sophisticated economic analyses work.**

**By ROGER E. JERMAN, RONALD D. ANDERSON and DAVID H. MAISTER**

In the long march from loading dock to corporate manager's desk, physical distribution professionals are increasingly relying upon the tools of management science.

The trend of PD managers becoming more involved in corporate objectives, strategies and policies has been well-documented in recent times. Making the transition from the immediate problems of traffic to the longer-range puzzles of distribution requires a set of attitudes which will bring the distribution professional's attention to bear on some of the more sophisticated business techniques available.

To find out how at least some distribution managers view selected modern-day management issues, we sent questionaires to 1,000 selected physical distribution managers in Canada. We received 155 usable responses.

Before examining the respondents' views on the management science techniques covered, let's first look at the respondents themselves. Of them, 116 were employed by manufacturing firms. Another 34 were employed by merchandising firms, and the remaining 5 were unclassified as to employer.

The average number of years of distribution experience of the respondents was 18 years. Some 68 percent had attended college or attained one or more college degrees.

Twenty-four respondents indicated they held upper level management responsibility; 72 indicated middle level; 53 indicated operations level; and, 3 were unclassified.

In the questionnaire, we asked the respondents three questions. First, we asked, "What policies should govern the assignment of selected physical distribution costs?"

Second, "How compatible are computer models and personnel with physical distribution personnel?"

Third, "Are quantitative methods that may be applied to physical distribution activities perceived as useful?"

Each of these three broad questions was accompanied by a series of sub-questions. Respondents expressed their opinions on a five point scale: Strongly agree, agree, neutral, disagree, strongly disagree.

In the accompanying tables, we combined the categories of "strongly agree" and "agree." Similarly, the categories of "strongly disagree" and "disagree" were combined.

The first statement, concerning costs, sought to determine whether these physical distribution managers saw any fundamental differences in standard costing for manufacturing and standard costing for their activities (see Table 1). Seventy-six percent saw no difference, agreeing that a standard costing system would provide better decision-making information. Seven percent did not think better information would result.

Generally, accounting reports on profits for the firm and for profit centers follow "accepted accounting principles" which do not permit the inclusion of imputed interest costs of inventory. That is, the funds committed to inventory could earn interest, and thus the loss of these earnings could be reflected by charges to imputer interest.

Disagreeing with principles of accounting, the responding physical distribution managers felt that imputed interest should be considered a relevant cost in decisions affecting inventory size.

Sixty-eight percent agreed that imputed interest costs of inventory should be included in internal physical distribution reports. Nearly 8 percent disagreed.

A common costing practice is to deduct freight costs from sales to ar-

*Roger E. Jerman is Associate Professor of Transportation at the Graduate School of Business, Indiana University. Ronald D. Anderson is Associate Professor of Marketing in the Graduate School of Business, Indiana University. David H. Maister is Assistant Professor of Business Administration, Graduate School of Business Administration, Harvard University.*

FIG. 1

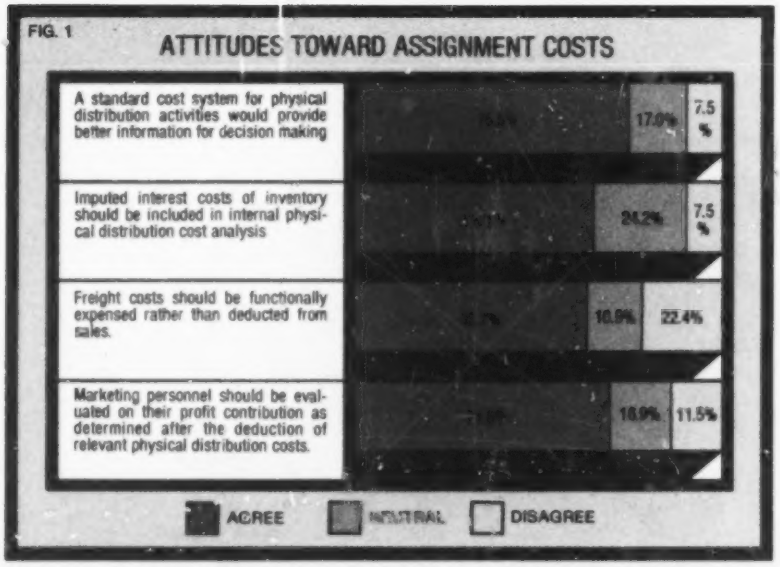



FIG. 3

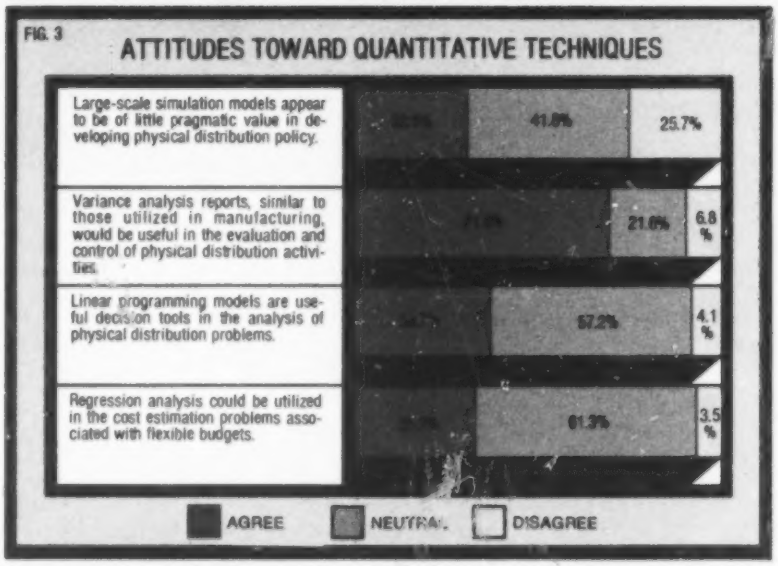
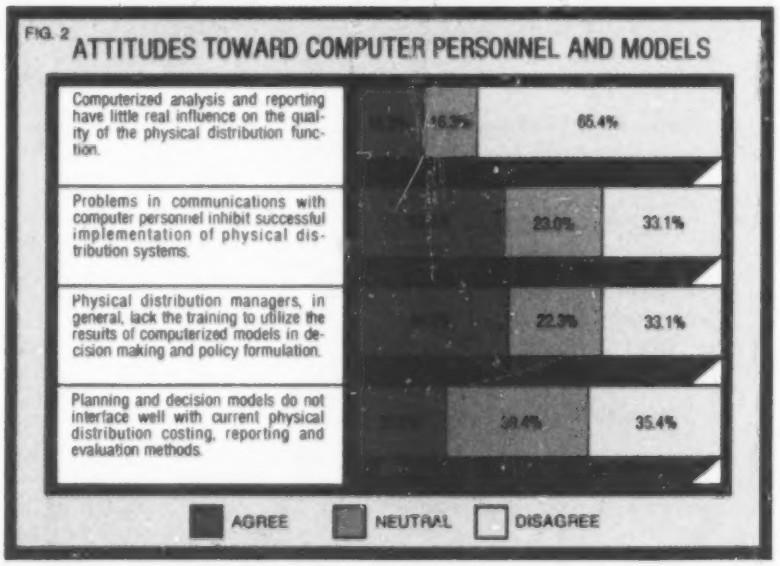



FIG. 2




## PLANNING & CONTROL *continued*

rive at net sales, which serves as the basis for relating other costs. This practice implies that the firm cannot influence the transportation cost. Readers of this journal realize that is not the case.

In addition, this practice leaves those responsible for creating the demand for freight service free from responsibility for its incurrence, since performance is measured by net sales and the costs related to net sales.

Sixty-seven percent indicated that freight costs should be functionally expensed rather than deducted from sales, while 22 percent opposed functionally expensing freight.

Because of the trade-offs involved, physical distribution costs are affected by marketing decisions on product mix, package, customer mix, order size, channels, drop shipments and the location of solicited customers. Yet marketing personnel are usually evaluated and rewarded through incentive plans based on performance measured by actual sales volume against planned volume.

This can invite salespeople to view physical distribution costs as a free service, thus encouraging suboptimization.

Seventy-two percent of the distribution managers agreed that marketing personnel should be evaluated on their profit contribution after deduction of physical distribution costs. Nearly twelve percent disagreed and supported the present practice.

The second broad research question concerned the compatibility of distribution managers with computer personnel and models, and the perceived usefulness of computer output.

A 65 percent majority of the respondents thought their computerized analysis and reporting positively influenced the quality of the physical distribution function (see Table 2).

However, responses to other questions indicate some significant problem areas. Although no clear concensus emerged on the compatibility of models and people, 44 percent agreed that communication problems with computer personnel inhibit their physical distribution activities.

Thirty-three percent did not feel this was the case. Forty-five percent indicated that they or their fellow physical distribution managers did not have the training to use the results of computerized models. Thirty-three percent thought present distribution managers had sufficient training to utilize the results of computerized models in decision making and policy formulation.

The final question in this section asked distribution managers to evaluate how well planning and decision models interface with current physical distribution costing, reporting and evaluation methods. Thirty-five percent thought there was a reasonably good interface, while 25 percent were negative on the interface. Nearly 40 percent were neutral.

The split in opinions on the ability of computer personnel to communicate and the perceived lack of training of physical distribution people in use of models makes it possible to draw a rather significant inference: improved training of physical distribution managers *could* lead to improved communication with computer people and improved quality of interface of planning and decision models.

Actually, this is only one of several inferences which could be drawn. Another is that there is no necessary relationship between the opinions on the ability of computer personnel to communicate and the perceived lack of training of physical distribution people in the use of models. The data disclosed nothing to tie the two together.

Another alternative is that computer people and model builders may need more training in the functional area of physical distribution to improve the communication and model interface.

Whatever the possible inferences, it is clear that these physical distribution people are very sure of the value of computerized analysis and reporting. They see problems in communication with computer people, in the technical training of physical distribution people, and in interfacing models with physical distribution costing, reporting, and evaluation methods.

The third broad research question concerning the usefulness of quantitative models contained several statements relating to some commonly used quantitative methods of analysis (see Table 3). In general formalized quantitative methods applied to physical distribution were perceived as useful.

Simulation models received the poorest score, with 33 percent agreeing that large scale simulation models are of little pragmatic value in developing physical distribution policy.

Twenty-six percent disagreed, and nearly forty-two percent were neutral or had no opinion.

The participating physical distribution managers gave various analysis the strongest support. Seventy-two percent thought that various analysis reports, similar to those utilized in manufacturing, would be useful to them in the evaluation and control of their present physical distribution activities. Only seven percent disagreed.

The tools of linear programming and regression analysis both showed over fifty percent neutral responses. This indicates a high degree of uncertainty as to the usefulness of linear programming models in the analysis of physical distribution problems. Also, this reflects the uncertainty of use of regression analysis in the cost estimation problems associated with flexible budgeting when applied to the functional area of physical distribution.

Responses to statements in this survey of Canadian physical distribution managers help to answer the three broad questions posed at the beginning of this article.

First, what policies should govern the assignment of physical distribution costs?

Four statements concerning policies and practices that should govern assignment are perceived as desirable by the majority of the respondents:

(1) The development of standard cost system for physical distribution activities.
(2) The reporting of imputed interest costs of inventory.
(3) The functional expensing of freight costs.
(4) The deduction of relevant physical distribution costs in the determination of profit contribution for marketing personnel.

The responses indicate that physical distribution managers are more concerned with managerial accounting techniques which will provide needed facts than they are with accounting theory and generally accepted principles of financial accounting. The majority that viewed each of the above issues favorably will most likely initiate the changes necessary to establish as typical these currently uncommon policies and practices.

Second, how compatible are computer models and personnel with physical distribution personnel?

Responses to the statements underlying this question disclose that a large majority of the respondents agree that computerized analysis and reporting has influenced the physical distribution function.

However, opinion was divided concerning the interfacing of planning and decision models with physical distribution activities, the severity of communication problems with computer personnel, and the attitude of distribution personnel toward computerized models.

These results seem to reflect almost universal acceptance of the power and potential of computer-assisted decision analysis, with mixed results in the implementation stage. Further, it appears that none of the above three problems associated with implementation could be pin-pointed as the most important.

Third, are quantitative methods that may be applied to physical distribution activities seen as useful?

The answer is unclear.

Many did not respond to the statements related to this question, even though completing other parts of the questionnaire. Those who did respond reveal a great deal of uncertainty concerning the evaluation of linear programming, simulation and regression analysis.

High neutral percentages (noted in the last table, except for the variance statement) could be interpreted as revealing a lack of familiarity on the part of many of the responding physical distribution managers with linear programming and regression analysis.

Increased exposure of physical distribution managers to these techniques could cause comparable studies in the future to yield drastically different results. ■

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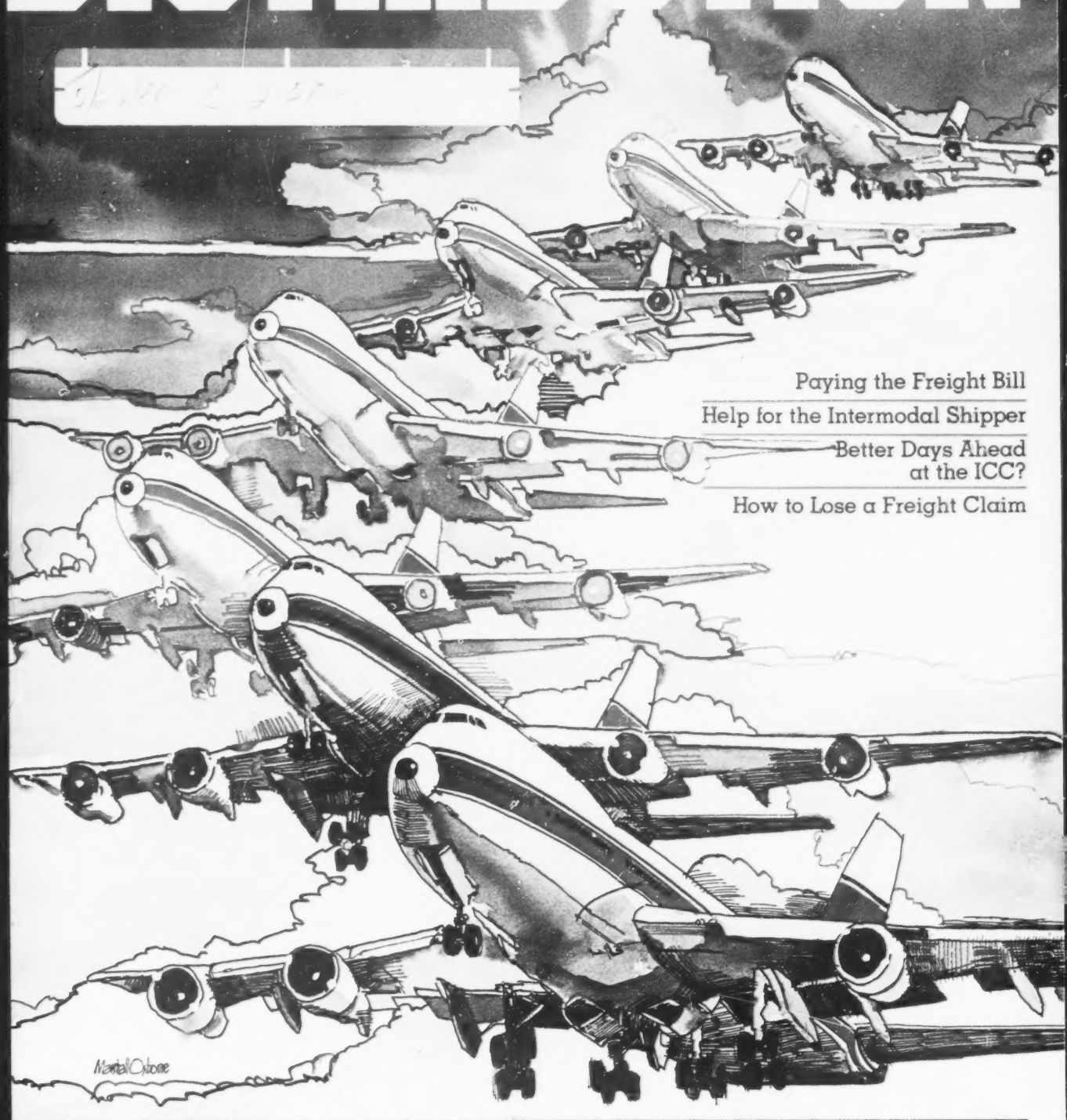


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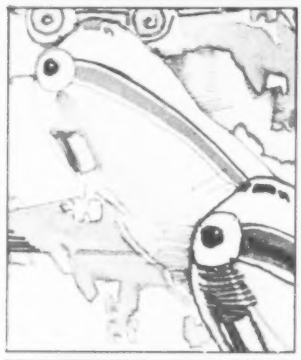

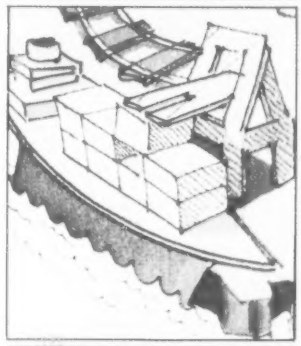

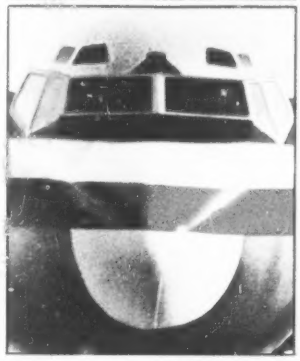

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If Howard scraps the House legislation, H.R. 6418, and offers the Senate bill for committee consideration, the chances for final Congressional adoption of broad competitive reforms would increase significantly. However, the trucking industry, represented here by the American Trucking Associations, is thought to have stronger support in the House. Pro-industry amendments offered to whatever bill the House considers are expected to have a better chance of acceptance.

The Senate bill, featuring new competitive reforms for the trucking industry, was a setback blow to motor carrier interests. Any hope of a Senate rejection of S. 2245, introduced by Cannon and Oregon Republican Bob Packwood, were effectively dashed when a key food hauling amendment was secured.

The floor amendment by Sen. Ernest Hollings (D-S.C.) sought to strike a proposal by Illinois Republican Adlai Stevenson that would have removed government regulations on the hauling of all food products, including processed and packaged items. Presently, the Interstate Commerce Commission exempts from regulation only unprocessed agricultural goods.

Hollings claimed that deregulation of processed foods would jeopardize 21 percent of trucking industry tonnage and up to 10 percent of revenues by opening up this previously regulated freight to owner-operators and independents.

Packwood obviously growing weary of Hollings' insurgency, shot back, "That business won't be lost to the regulated carriers. It simply means that they will have to compete for it for a change."

The Hollings amendment was defeated by a relatively close 47-39 vote. The attempt to reinstate regulation for processed foods was the key issue for ATA and its defeat signalled what Packwood later called "momentum" toward passage of strict legislation.

Another amendment to remove virtually all entry controls for carriers serving communities of 50,000 or less, introduced by Sen. Harrison Schmitt (R-N.M.), was defeated, 51-35. Schmitt said his proposal was designed to assure service to small communities by further easing entry rules for new carriers.

Schmitt said the amendment was needed because most carriers are not now serving all communities listed in their certificates. Hollings said the amendment would only increase pressure among a larger number of firms for a limited amount of freight. It was one of the South Carolina senator's few victories.

An amendment by Senator Cannon to place the motor carrier portion of trailer-on-flatcar traffic (TOFC) back under ICC regulation passed. A provision added onto the bill in the Commerce Committee would have removed restrictions on traffic moving by motor vehicle incidental to movement by rail.

Cannon sought to remove the provision because of a lack of information on piggyback transportation. Cannon did agree to hold hearings in the near future on TOFC movements and to consider legislation at that time.

Following the floor debate Cannon said, "This is a great day in the area of regulatory reform. It gives an opportunity for all people to get into an industry that has been closed for a long time. It's great for the American consumer."

## DISTRIBUTION PERFORMANCE INDEX



*The Distribution Performance Index (DPI) is designed to measure the economic health of the distribution industry. The DPI combines incoming activity indicators with outgoing activity indicators. Truck shipments rose to a level of 134.8 in May, a record high. The DPI rose by one point to 135.6 in June. Last year was a record year for shipments, a fact in the calculation of shipments contained in both indicators. A gateway line area that does most business as a source or destination state, but the small increase portends possible decrease, if the rate remains the same. "We don't ship as much as we used to. I have to keep costs down so I consolidate orders and ship in truckload amounts. My customer service standard is not met, but I have to keep costs down."*

*Air shipments also were expected to decline through June. The decrease is due to the use of mail instead by shippers to ship small packages and a lessening of small shipments. Air cargo is expensive and firms are cutting costs. Water shipments remain constant for the period, but are expected to decrease as firms reduce their purchases of raw materials. The decline has already hit rail shipments, which are forecasted to fall from a level of 113.4 in May to 110.4 in June. One shipper commented that "Our raw material costs are going through the roof. We have to keep costs down, and our demand is off. Our only alternative is to sell but a unit we are doing now. 1980 will be the year of retrenchment."*

# TIME FLIES SO SHIPPERS USE AIR FREIGHT

Time is a commodity that can't be touched, tasted, smelled, seen or heard. Yet the ticking of the clock is a cost factor which puffs up the price of every product shipped.

Let a crucial shipment of parts fail to make a production line in time and suddenly a company's costs inflate and rise out of sight. Let a consignment of printing plates be delayed, and a printer penalizes his client by charging a premium price. Let a shipment of promotional materials fall off schedule, and a fortune in opportunities is lost.

That's why air freight ranks high in terms of the number of companies which use it. In fact, DISTRIBUTION's survey of U.S. manufacturers found that more of them use air freight than any other mode—with the lone exception of regulated motor carriage.

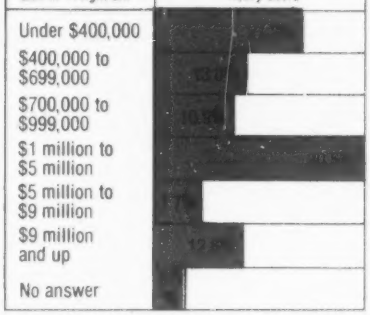
By way of our survey, 2,122 distribution professionals discussed the subject of air freight with us. Of that group, some 73 percent—1,535 respondents—said that air freight was purchased by someone in their shipping location. In comparison, 99 percent of the group said their shipping location uses regulated motor carriage, while 68 percent use rail. Another 45 percent use ocean carriage and 11 percent ship via barge.

While the use of air freight is broad across the ranks of these manufacturing companies, it isn't deep. On average—and including all 2,122 respondents—air freight eats up 4.5 percent of the freight bill at each shipping location.

To get a better look at the air freight user, we zeroed in on those respondents who spent more than the average 4.5 percent of their freight bill on air. Culling out below-average air freight users left us with 997 heavy users of air freight.

A study of these shippers turns up some interesting statistics. For instance, the average *total* freight bill at the locations of these shippers was a hefty $3 million. The heavy users spent an average of some 15 percent of that on air freight.

Annual Freight Bills Of Heavy Users Of Air Freight




Part Of Freight Bills Devoted To Air Freight

| Pct. of Bill | Pct. of Respondents |
|---|---|
| 1-9 | 40.7% |
| 10-19 | 29.0% |
| 20-29* | 12.8%* |
| 30-39 | 5.8% |
| 40-49 | 2.3% |
| 50-59 | 2.1% |
| 60-69 | 2.6% |
| 70-79 | 1.1% |
| 80-89 | 1.4% |
| 90-100 | 2.1% |

How to read: *12.8% of the respondents spend from 20-29% of their total freight bill on air freight.

Due to the premium price of air freight, it is not surprising that the greatest numbers of shippers spend the least amounts of their freight dollars on air. For instance, of the 997 heavy users of air freight, nearly 41 percent spend between 4.5¢ and 10¢ of each freight dollar on air.

The second largest concentration of respondents, 29 percent, spend between 10¢ and 20¢ of their freight dollar on air. Another 13 percent spend between 20¢ and 30¢ of their freight dollar on air. That leaves less than 18 percent of the respondents who spend more than 30 percent of their freight outlays on air.

In other words, the survey confirms what many have believed: Shippers tend to use air freight, but they tend to restrain the use of it where they can.

There seems to be little correllation between the size of a shipper's total freight bill and his use of air freight. The behemoth corporation, in terms of freight expenditures, is as likely to ship via air as the Lilliputian company. For example, our survey found the greatest number of heavy air freight users have annual freight bills ranging from $1 million to $5 million. Some 31 percent of the respondents fit this category.

Next were the shipping points with the smallest freight bills—under $400,000. Some 22 percent of these use air freight. Running neck and neck for third place are companies with freight bills totaling between $400,000 and $700,000 (13 percent are heavy users) and those who spend more than $9 million on freight (12.5 percent are heavy users of air).

On average, each distribution department in which these respondents are located has eight members. Again on average, three of those department members report directly to the person who answered our questionnaire. The average shipping location covered in the survey is the control center of four or less shipping points.

It's interesting to look at which activities the respondents said their department is engaged in. Overwhelmingly, the respondents said their departments are involved in customer service—79 percent of those surveyed said so.

Another 47 percent said the department participated in selecting distribution points. And 32 percent said the department was involved in setting inventory levels.

Smaller percentages of those surveyed admitted involvement in marketing tactics or strategies. For example, 12 percent participate in targeting domestic markets, and 9 percent are involved in targeting foreign markets. Another 11 percent participate in the timing of special sales, while 9 percent are involved in sales forecasting.

In short, then, most respondents list customer service as a main activity of their day. This is not surprising, since customer service is another term for getting goods to the buyer on time. And the time factor is the primary underlying reason why shippers are willing to pay premium rates to send cargo by air. □

# NOTE

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Chilton's

JUNE 1980

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# FREIGHT SECURITY: IS THIS ITS FATE?

SPECIAL REPORT:

VOLUME 79, NUMBER 6

Chilton's

JUNE 1980

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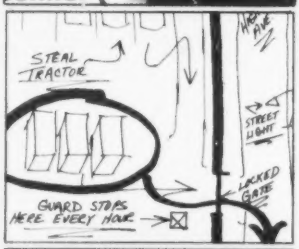

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**The Cover:** *The walls of distribution security look solid, but they've been breached. At least a billion dollars worth of goods are diverted from the stream of U.S. distribution every year.*

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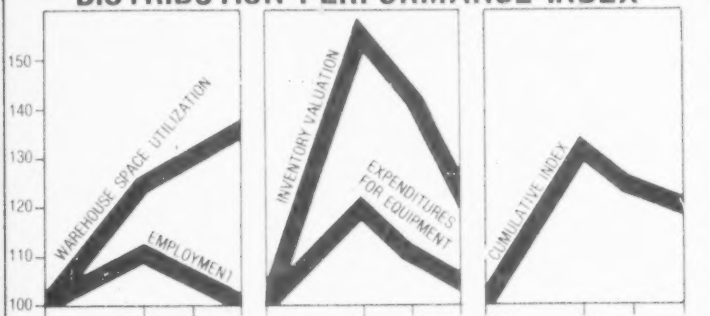
## DISTRIBUTION PERFORMANCE INDEX




| CATEGORY | 1976 | MAY 1980 | JUN 1980 | JUL 1980 |
|---|---|---|---|---|
| Whse. space utilization | 100 | 125.0 | 130.0 | 135.0 |
| Employment | 100 | 111.0 | 105.0 | 100.0 |
| Inventory valuation | 100 | 155.0 | 143.0 | 125.0 |
| Expenditures for equipment | 100 | 119.9 | 110.0 | 105.0 |
| Cumulative index | 100 | 131.0 | 125.0 | 120.0 |

Down . . . Down . . . Down . . . seems to be the trend for the economy in the forthcoming months. Interest rates are plummeting at record levels from their April high of near 20 percent and should level off to around 13 percent by mid year. Prices are also beginning to moderate with the April wholesale price index increasing by 0.6 percent after four successive months above one percent. Employment is also declining with the unemployment level expected to reach nine percent by years end. The economy is falling into a classic recession which should be as long and as deep as the 1974-75 slowdown.

The distribution sector of the economy is exhibiting a similar decline. The June Distribution Index shows a cumulative drop of more than 6 points from the May level with the July level to fall to 120.0. Many shippers are experiencing dramatic drops in orders as customers cut back purchases because of the high cost of money. One shipper indicated that "My orders are off by more than 30 percent from last year. Our inventories are lower because we anticipated the decline, but our profits are dangerously low. This is a tough period for us."

All of the categories in the June index showed declines with expenditures for materials handling dropping to a level 110.0 for June and are forecasted to decline even further to 105.0 for July, 1980. This is due to the decrease in major capital expenditures by shippers. Employment in the distribution sector is also expected to drop dramatically with the level going from 111.0 in May to a forecasted 100.0 in July, 1980. The expected decline in prices is depicted in the dramatic drop in inventory valuation from 155.0 in May to 125.0 in July. Warehouse space utilization is expected to rise during the period, for shipper inventories will not move quickly. Space utilization is expected to increase by 10 points from May to July 1980. As one public warehouseman stated, "When the economy gets bad, our business goes up. We are countercyclical to the trends in the industry. But we feel sorry for our customers. Their merchandise is just not moving."

One factor seems to be happening in this recession—shippers were more prepared for it than for similar times in the past. The reason is due the better planning shippers did to deal with such situations. Inventories are as much as 40 percent lower than during the 1974-75 recession. While customer service levels have fallen somewhat, firms found that customers are more willing to accept delays or reduced shipments if it means lower costs.

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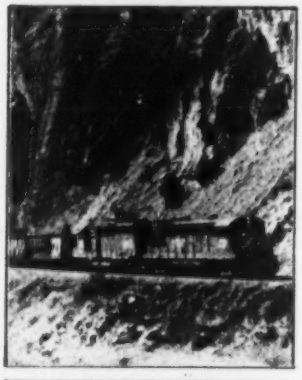

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**The Cover:** The Missouri Pacific is just one of a long list of railroads developing contract arrangements with shippers of bulk commodities. The rates are not always lower, but the service is designed for a shipper's needs.

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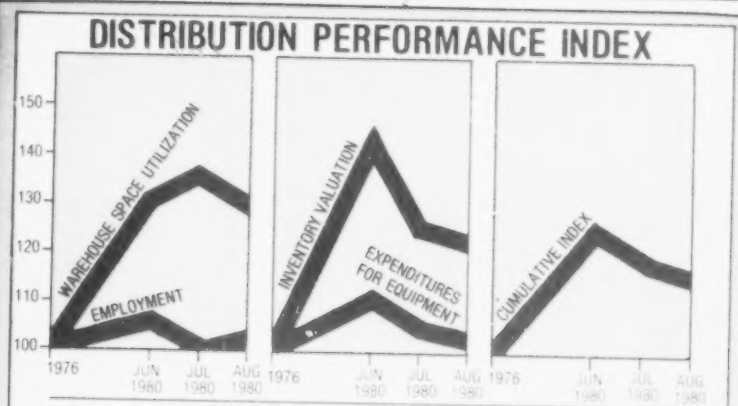


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| Inventory valuation | 100 | 143.0 | 125.0 | 123.2 |
| Expenditures for equipment | 100 | 110.0 | 105.0 | 104.1 |
| Cumulative index | 100 | 125.0 | 120.0 | 118.6 |

*The credit controls announced by the Federal Reserve in April have had a significant effect on slowing down the economy as well as the inflation rate. The inflation rate has dropped off by more than eight points to an annual rate of 10.6 percent through July 1980. In addition, consumer demand has softened to the point where the recession could be worse than the one experienced in 1974-75. Shippers are reporting significant drops in orders and have slowed down their distribution operations accordingly. As one shipper stated: "My firm has reduced inventories and cut back on shipments in order to keep costs down and ride out the rest of the downturn."*

*The economic slowdown is demonstrated in the August* Distribution Index *with the cumulative index dropping from 120.0 in July to 118.6 in August. The decrease is reflected in the drop in warehouse space utilization from 135.0 in July to 130.0 in August. The cause for this decrease is due to the paring down of inventories by manufacturers to reduce their holding costs. During the 1974-75 recession, warehouse space utilization was much higher than now. The reason for this is that shippers were more prepared for the recent slowdown than the one in 1975.*

*Employment in the distribution field rose slightly from a level of 100.0 in July to 101.0 in August 1980. This cannot be regarded as a significant increase, but rather as a seasonal adjustment in this area. The rate of inventory valuation also decreased, reflecting the slowdown in the inflation rate. It declined from a level of 125.0 in July to 123.2 in August. Shippers are also cutting back on their purchases of major equipment, with the decrease in expenditures for materials handling equipment going from 105.0 in July to 104.1 in August.*

*The general response of shippers to the recession is one of cautious optimism. While many feel the recession is not over, they regard it as a kind of necessary adjustment. As one shipper stated: "My firm doesn't like to see orders for our goods fall off, but inflation was getting out of hand. Short-term slowdown in exchange for long-term growth seems worth it."*

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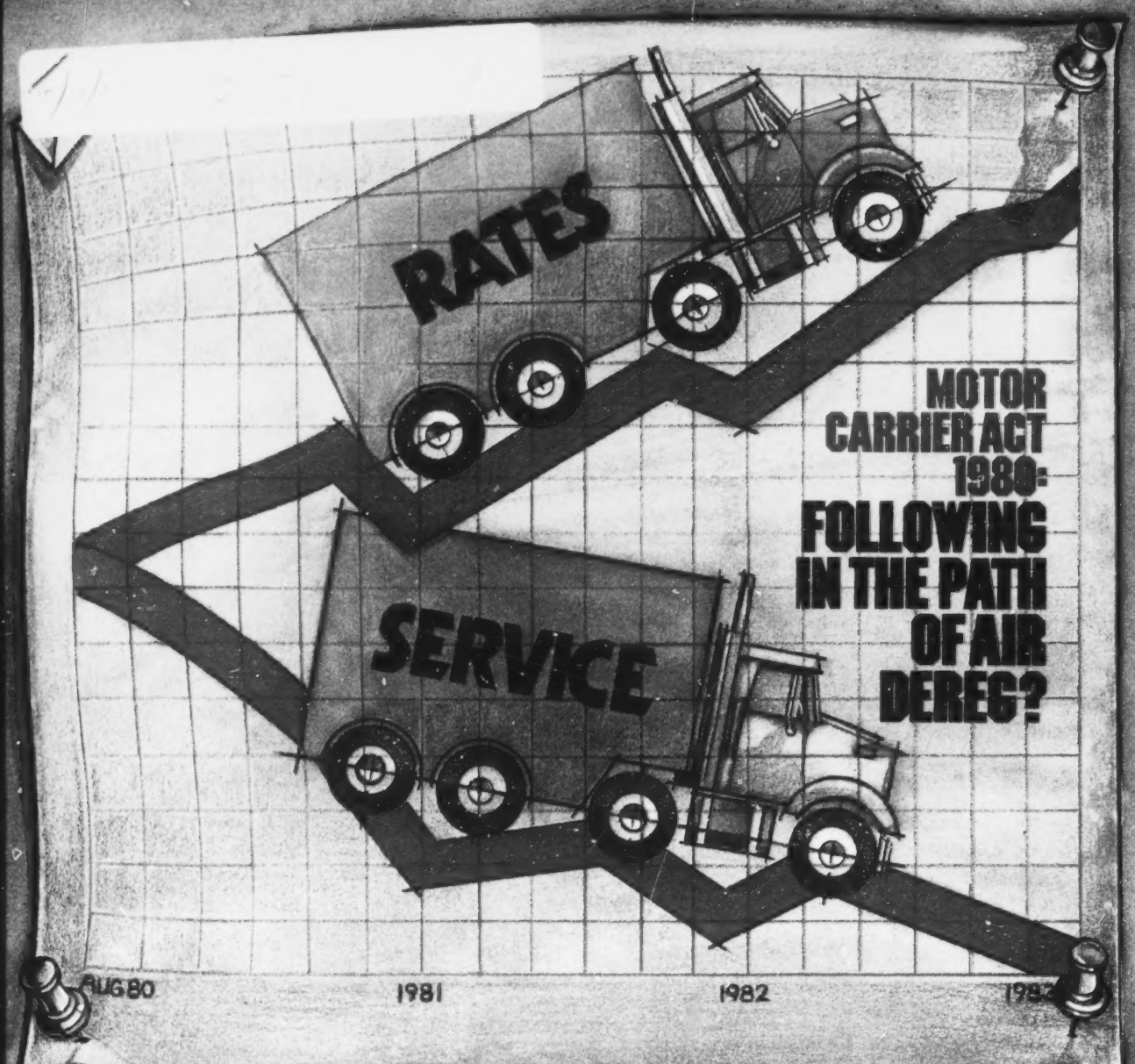


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SOURCEBOOK: Index of Distribution Information

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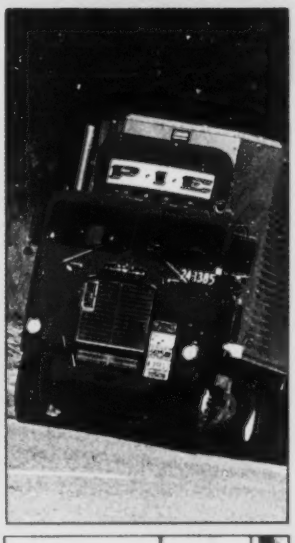

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**The Cover:** *Shippers fear motor carrier deregulation will make their costs race and their service from carriers skid, repeating the trends of the air cargo industry following deregulation.*

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DISTRIBUTION (USPS 158100), (ISSN 0195-7244), owned by Chilton Co., is published monthly at Chilton Way, Radnor, PA 19089 (215) 687-8200. Chilton Co. is a division of American Broadcasting Companies Inc., New York, N.Y. Controlled circulation postage paid at Philadelphia, Pa. ©CHILTON COMPANY 1980. Subscription rate: U.S. and possessions, $20 per year. Canadian, $30. Foreign, $40. Single issue $2.00 except Distribution Guide Issue—$20 per copy. Postmaster: Send form 3579 to DISTRIBUTION, P.O. Box 2105, Radnor, PA 19089.

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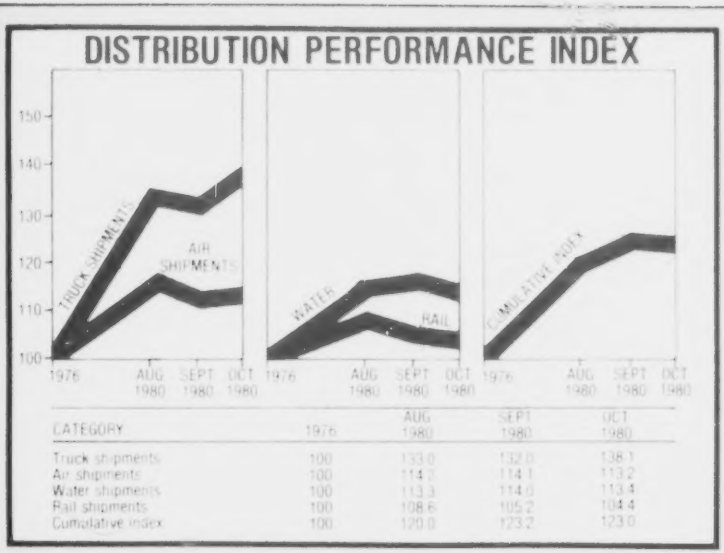


| CATEGORY | 1976 | AUG 1980 | SEPT 1980 | OCT 1980 |
|---|---|---|---|---|
| Truck shipments | 100 | 133.0 | 132.0 | 138.1 |
| Air shipments | 100 | 114.2 | 114.1 | 113.2 |
| Water shipments | 100 | 113.3 | 114.0 | 113.4 |
| Rail shipments | 100 | 108.6 | 105.2 | 104.4 |
| Cumulative index | 100 | 120.0 | 123.2 | 123.0 |

*Change seems to be the correct word for the future of the U.S. economy. Industrial production is beginning to pick up, housing starts are beginning to rebound, and inflation seems to be moderating.*

*The recovery will be a slow one and economists are predicting a rebound by the first part of 1981. Inflation has dropped from an adjusted annual rate of 18 percent to 12 percent in less than 4 months. The prime rate has also dropped from a high of 20 percent in April to 11 percent in July 1980. Consumer demand is definitely down, with retail sales off by more than 35 percent from last year.*

*The Distribution Index is reflecting this decline. Truck shipments dropped from a level of 133.0 in August 1980 to 132.0 in September. This sector is expected to rebound, with a forecast increase to a level of 138.1 through October.*

*Air shipments are also down and have been falling since April 1980. They are forecast to fall to 113.2 in October 1980.*

*One shipper in the survey stated that his firm was in a "holding pattern until things get better. We insist on full truckload deliveries and have increased our customer service shipment times."*

*Water and rail shipments are also off. Rail shipments are forecast to fall to a level of 104.3 in October 1980. This mode has experienced a decline since May, when the index reached a level of 110.4 Water shipments have shown a somewhat zig-zag pattern since mid-year, with shipments rising and falling by only moderate amounts. They are expected to fall to a level of 113.4 through October.*

*The cumulative index has followed the trend in the economy, falling from 131.3 in March. The index is expected to be 123.0 in October 1980. As one shipper stated. "It can't get any worse. Things went down and now they are going up. I only hope they go up far enough. My firm is hurting right now."*

# NOTE

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Chilton's
OCTOBER 1980

# DISTRIBUTION

## FOR TRAFFIC & TRANSPORTATION DECISION MAKERS

# THE EXPORT DECISION: Distribution's Vital Role

VOLUME 79, NUMBER 10

Chilton's

OCTOBER 1980

# DISTRIBUTION

CARL W. LOCK, PUBLISHER ESTABLISHED 1901 AS THE *TEAMSTER* ART BURNS, CIRCULATION MANAGER

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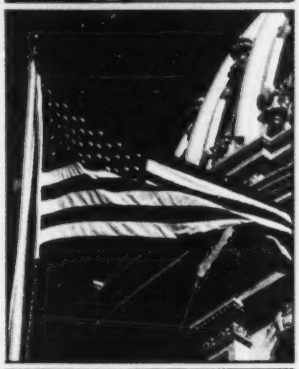

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be unable to meet the future needs of a growing America," a position paper from the governor's office says.

"Governor Reagan believes that present levels of public and private investment will not preserve the existing system," the candidate's office says. "For example, highways are deteriorating twice as fast as they are being rebuilt, and inadequate rehabilitation will soon cost users more in reduced service levels than the cost of adequate rehabilitation.

"Governor Reagan believes that government overregulation is inhibiting the return on investment necessary to attract capital for future growth and jobs creation," his office continues. "He realizes that a maze of Federal agencies, Congressional committees and conflicting policies is driving up costs and retarding innovation.

"Consequently, the role of government in transportation must be redefined. Governor Reagan would use his power as President to utilize the forces of the free market to promote competition, reduce costs and improve the return on investment to stimulate capital formation in the private sector."

*JOHN ANDERSON*

"The quality of our transportation network assumes a fundamental importance" in light of special U.S. requirements for the export of coal and wheat, an aide to the independent candidate says.

The transportation infrastructure, Anderson says, was designed at a time of declining fuel prices. It must be adapted to a new period of growing energy scarcity and increasing prices, he believes.

The government has used the railroad industry to promote economic and social goals, the Illinois congressman charges, often to the extent that shippers on profitable, heavily traveled routes have been forced to cross-subsidize shippers on less remunerative lines.

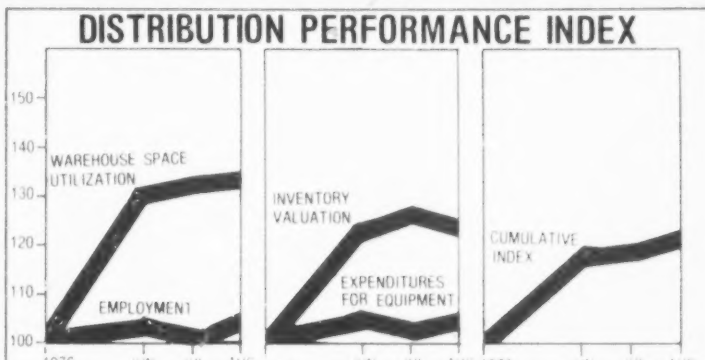
The independent candidate wants the railroads freed from "anachronistic regulation." The government must shift its focus "from preserving unprofitable portions of the system to preservation of the system itself," his office says.

Specific Anderson proposals include increased flexibility to determine pricing and operating policies, and guaranteed rate protection for shippers of bulk commodities who are captive to rail carriage over long distances.

If elected, Anderson would also: abolish collectively set rates; provide funds to states for the purchase of abandoned lines; refund investment tax credits to provide additional investment incentives; and encourage the future formation of several long-haul rail lines to maximize the efficiency of uninterrupted rail movements.

Anderson would support Conrail at least until the U.S. Railway Association has completed its study of the troubled line and has made recommendations to Congress, his office reports.

To revitalize the nation's ports, Anderson would establish a Coal Export Authority within the Department of Commerce. This body, his office says, would explore the need for improved port facilities to accommodate coal for export and coastal movements.




| CATEGORY | 1976 | JUN 1980 | JUL 1980 | AUG 1980 |
|---|---|---|---|---|
| Whse. space utilization | 100 | 130.0 | 135.0 | 130.0 |
| Employment | 100 | 105.0 | 100.0 | 101.0 |
| Inventory valuation | 100 | 143.0 | 125.0 | 123.2 |
| Expenditures for equipment | 100 | 110.0 | 105.0 | 104.1 |
| Cumulative index | 100 | 125.0 | 120.0 | 118.6 |

*The fourth quarter of 1980 will historically be referred to as the "bottoming out" period. The deepest and shortest recession in U.S. history is coming to an end and all of the economic indicators are forecasting a favorable 1981. Inventories are being reduced as consumer demand begins to rise. Shippers are expected to slowly expand their shipments in the last quarter of 1980, and gradually increase the rate during the 1st quarter of 1981. Industry managers are exhibiting more caution in this recovery, than during the same period in the 1973-74 recession. The reasons for the slow recovery are the high cost of investment capital, the uncertain political environment and the lack of any real jump in demand. As one distribution manager stated: "We can't afford to be overly optimistic. It's too risky."*

*The* Distribution Index *is forecasted to rise to a level of 121.1 through October. This modest growth is also exhibited in the moderate rise in warehouse utilization which will rise to a level of 132.2 in October. Similarly, employment is expected to rise to a level of 103.3. The expected increase in inflation which will average 12 percent in 1980 is reflected in the rise in inventory valuation to 128.2 through October 1980. Shipper confidence is gradually improving as reflected in the modest growth in expenditures for materials handling equipment. Shippers are willing to expand their distribution operations in preparation for the forecasted recovery.*

*The Fall quarter of 1980 shows promise for the future, but not all companies are optimistic. As one distribution executive stated: "You can't trust economic forecasts. We got stung before when we jumped too quickly. This time, caution prevails in my firm."*

**Correction**

*In the September issue, we incorrectly reported that AG Carriers, Inc. is a wholly owned subsidiary of Citrus Central Company. AG Carriers is, instead, a motor carrier cooperative organized by twenty-four U.S. producers of agricultural products.*